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SOUTH AMERICAN COCCINELLIDAE (COLEOPTERA),
PART XI: A SYSTEMATIC REVISION
OF HYPERASPIDINI (HYPERASPIDINAE)

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INTRODUCTION

This study continues the revision of South American Coccinellidae. Parts I-X dealt with a variety of taxa with particular emphasis on Coccidulinae and Scymninae. Here we begin to deal with the extensive list of taxa in Hyperaspidae, beginning with the tribe Hyperaspini.

Hyperaspidae are small, usually colorful, highly patterned lady beetles primarily Western Hemisphere in distribution. As such, they attracted the attention of early taxonomic researchers who created a great many specific names as well as some confusion in categories above the species level. MULSANT (1850) described several genera and subgenera of "Hyperaspiens" as well as many species. He divided his "Hyperaspiens" into several "Branches," two of which, "Hyperaspiars" and "Thalassiaires," contain the taxa herein dealt with. Mulsant's genus *Cleothera*, with two subgenera, *Cleothera* and *Cyra*, was distinguished from *Hyperaspis* Redtenbacher primarily by the presence of a basal pronotal line (*Hyperaspis*) or absence of a line (*Cleothera*). This character was an unfortunate choice because it is illusory or absolutely fails in many species. Mulsant himself described taxa in *Cleothera* that were actually *Hyperaspis*, and vice versa. CROTCH (1874) further muddled the picture by synonymizing *Cleo-*

thera under *Hyperaspis*. Subsequent authors either followed Mulsant or Crotch for generic assignments, creating a situation where correct generic assignments can be arrived at only by examination of type specimens.

CHAPIN (1966) was first to make sense of some generic categories by using genital and antennal characters not observed by earlier workers. EL ALI (1972) further clarified generic relationships, but it was DUVERGER (1989) who clarified distinctions between Brachiacanthini Mulsant and Hyperaspidini, providing a suite of characters for each taxon that allows accurate generic assignment. He used both male and female genitalic structures as well as an external character to distinguish the tribes.

Some genera of Hyperaspidini have been studied by Milléo and colleagues. *Tiphysa* Mulsant was placed in Hyperaspidini by DUVERGER (1989), but MILLÉO & ALMEIDA (2003) transferred it to Brachiacanthini. *Diazonema* Weise was revised by MILLÉO & ALMEIDA (2000) and *Thalassa* Mulsant was revised by MILLÉO *et al.* (2004). Three previously unrecognized genera are described herein.

BIOLOGY

Host records are not available for most South American species of Hyperaspidini. Data for North American species of *Hyperaspis* (GORDON 1985) indicate that scale insects of the Coccidae and Pseudococcidae are common prey, although aphids and other Homoptera have been recorded (<http://www.sel.barc.usda.gov/scalenet/query.htm>). Biological data for members of *Menoscelis* did not exist until ORIVEL *et al.* (2004) published on the biology of "*Thalassa saginata*" (*Menoscelis saginata*). They discovered that the larvae of this species develop inside colonies of the arboreal ant *Dolichoderus bidens* (L.), and are obligatory myrmecophiles. They also stated that a study of arboreal ant colonies did not reveal the presence of *M. saginata* in nests of other than ant species.

The list below is taken from literature sources and from label data. Host names have been verified or corrected using ScaleNet, a computerized database of scale names that can be accessed at: <http://www.sel.barc.usda.gov/scalenet/query.htm>.

Clypeaspis trilineata (Mulsant)

Pseudococcus calceolariae (Maskell) - SCHILDER & SCHILDER (1928)

Saccharicoccus sacchari (Cockerell) - SCHILDER & SCHILDER (1928)

Hyperaspis pseudodonzeli n. sp.

Orthezia insignis [*Insignorthesia insignis* (Browne)] - label data

Hyperaspis orthivora n. sp.

Orthezia sp. - label data

Hyperaspis onerata (Mulsant)

Orthezia sp. - label data

Phenacoccus sp. - label data

Pulvinaria sp. - label data

Hyperaspis festiva Mulsant

Sipha flava (Forbes) - SCHILDER & SCHILDER (1928)

Saccharicoccus sacchari (Cockerell) - SCHILDER & SCHILDER (1928)

Hyperaspis connectens (Thunberg)

Sipha flava (Forbes) - SCHILDER & SCHILDER (1928)

Temisvalvae notata (Mulsant)

Phenacoccus cassava ? - label data

Phenacoccus herreni Cox and Williams - label data

Temisvalvae quinquepustulata (F.) = *raynevali* (Mulsant)

Phenacoccus sp. - label data

Planococcus citri (Risso) - label data

Temisvalvae bromelicola (Sicard)

Pseudococcus bromeliae = *Dysmicoccus brevipes* (Cockerell) - SICARD (1925)

DIAGNOSTIC CHARACTERS

Principal morphological terms used in descriptions and keys are briefly explained to simplify key and description usage.

P u n c t a t i o n a n d s u r f a c e s c u l p t u r e . Relative size of punctures on head, thorax, and elytral and ventral surfaces

is often useful. Size and spacing of punctures on various structures are compared. Spacing of punctures is expressed as "separated by a diameter (of a puncture)," "separated by less than a diameter," etc. Color, particularly dorsal patterns, is a primary distinguishing character. Surface appearance varies from shiny to quite dull depending on degree of alutaceous sculpture.

Head. The clypeus is long or short, concealing the labrum or not, apically emarginate. The frons and clypeus are joined either abruptly (Fig. 1), or smoothly, obliquely (Fig. 11), and the inner eye margin is smoothly rounded, lacking an eye canthus projecting from frons onto inner margin of eye.

Prosternum. Prosternal carinae usually converge at some point from apex to base of prosternum, but usually do not reach the base before converging, creating a "stem" that reaches the base. In a few species the carinae are incomplete, not convergent, or absent.

Abdomen. Postcoxal line configuration is quite uniform, but the line may or may not extend to the posterior margin of the 1st abdominal sternum; it may be flattened medially along posterior margin or rounded; and the recurved apical portion varies in degree of anterior extension.

Male genitalia. Genital structure is important for identification of males. GORDON (1985) illustrated and defined genitalic parts in detail, and the most important structures are discussed here. Basal lobe: median projection of phallobase, serving as a siphonal guide; a simple structure, differing in length and shape. Parameres: paired lateral projections of phallobase serving to position and hold basal lobe in position during copulation. Phallobase: includes the basal piece, basal lobe and paramere of male genitalia. Siphon: sclerotized rod inserted through the basal lobe and into the female bursa copulatrix during copulation; corresponds to aedeagus or penis, differing in length, form of apex, and structure of basal capsule.

Female genitalia (Fig. 143). Two forms of genital plates occur in Hyperaspini: one is short, more or less transverse, as in *Hyperaspis* species, and the other long, slender, as in *Tenuisvalvae* species. The spermathecae are structurally unique within the Coccinellidae, making the homologies of component structures unclear. After discussion with N. Vandenberg (pers. comm.), it seems best to use a modified version of DOBZHANSKY's (1941) terminology. The

spermatheca is divided into a slender basal "tube" (basal unit) and a retort-shaped distal capsule united to the basal portion by a slender connecting duct. The basal unit is tube shaped, lacks a visible ramus, accessory gland is present (not shown in many illustrations), and is rounded apically, with an apical "beak" (chitinized appendix). The distal portion is more or less rounded, not noticeably sclerotized, and apparently devoid of distinguishing characters (see Fig. 143).

METHODS

Morphological structures, both external and internal, were discussed and illustrated by GORDON (1985). Most of the same terminology is followed here, and that publication should be consulted if clarification is needed. Genital techniques are discussed under "Dissection" below. Lectotype and paralectotype labels were affixed to specimens so designated throughout. Label data for all newly described taxa are transcribed exactly as they appear on the label. All locality records listed in the text were taken from specimens actually examined; published records were not accepted because a defining criteria at the species level, genitalia, were not examined by most previous authors.

Dissection. Both sexes should be dissected when examining *Hyperaspis* specimens. Specific techniques consist of softening a specimen in hot water, removing the abdomen, placing it in a dilute solution of potassium or sodium hydroxide until muscle and fat are removed, rinsing abdomen and genitalic structures in clear water, and placing cleaned structures in glycerine for examination. Genitalia may be stored in several ways, but here they were stored in glycerine microvials or mounted on a card attached to the donor specimen.

Type material. Type specimens have been examined for all specific taxa unless otherwise indicated. Detailed information is included under "Type locality" and "Remarks". The "Methods" sections in GORDON (1985, 1999) contain discussions of locality records and primary type depositories that are applicable here.

Collections. The following acronyms denote depositories for specimens used in this study: (BM) Natural History Museum, London; (CAS) California Academy of Sciences, San Francisco, California; (CCM) Claudio Canepari, Milan; (CDA) California Department of

Food and Agriculture; (CMP) Carnegie Museum of Natural History, Pittsburgh, Pennsylvania; (CNC) Canadian National Collection, Ottawa, Ontario; (DEI) Deutsches Entomologisches Institut, Müncheberg; (DZUP) Universidade Federal do Paraná, Curitiba, Brazil; (GG) Guillermo González, Santiago, Chile; (MBR) Museo Argentino de Ciencias Naturales "Bernardo Rivadavia", Buenos Aires, Argentina; (MHNG) Muséum d'Histoire Naturelle, Geneva, Switzerland; (MNHL) Muséum d'Histoire Naturelle, Lyon, France; (MNHP) Muséum National d'Histoire Naturelle, Paris, France; (MHNS) Museo Nacional de Historia Natural, Santiago, Chile; (NHMV) Naturhistorisches Museum, Vienna, Austria; (MSNG) Museo Civico di Storia Naturale "Giacomo Doria", Genova, Italy; (NREA) Naturhistoriska Riksmuseum, Entomologiska Avdelningen, Stockholm, Sweden; (SMTD) Staatliches Museum für Tierkunde, Dresden, Germany; (UMZC) Cambridge University Museum, Cambridge, England; (USNM) U.S. National Museum of Natural History, Smithsonian Institution, Washington, DC; (ZMHB) Zoologisches Museum, Humboldt Universität, Berlin, Germany; (ZMMU) Zoological Museum of Moscow, Lomosov State University, Moscow, Russia; (ZMUC) Zoological Museum, University of Copenhagen, Denmark.

DISCUSSION OF TYPE MATERIALS

Most previously described species of Hyperaspidae were named by MULSANT in a series of publications. His 1850 treatment of the world Coccinellidae was the first, and remains the most significant publication in the annals of lady beetle systematic. In that work he listed material examined from many sources, both public and private, listing the species locality followed by the collection from which the specimens came, e.g., Collect. Dejean, Chevrolat, etc. Most of these collections have been preserved in present museum holdings, but a few cannot be located; hence species placements in Hyperaspini or Brachiacanthini are unknown or doubtful.

Types of species described by T. KIRSCH (1876, 1883), mostly from Peru, were previously presumed destroyed because an inquiry concerning the types, which was directed to Dresden (SMTD) 30 years ago, elicited that response. Helmut Fürsch, Passau, Ger-

many, informed us (pers. comm.) that at least some Kirsch types are present in Dresden. Subsequent communication with Olaf Jaeger (SMTD) confirmed this, and we have been able to examine most of the needed specimens. MULSANT (1870) described several species from the Bruck collection. Helmut Fürsch (pers. comm.) informed us that the Emil von Bruck collection had been in Bonn and was destroyed by bombing in 1944. Therefore, the identity of those species is questionable. Specimens from the Trobert collection cannot be traced in spite of numerous inquiries directed to museums. Specimens from the Melly collection also cannot be traced. In addition, some taxa whose type material should be in existing collections, as indicated by Mulsant, are simply not there. Following is a list of Hyperaspidae species for which type material has not been located. The Mulsant species are followed by the name of the original collection from which his specimens came.

Cleothera adhaerens Mulsant - Sallé

Cleothera cincta Kirsch - should be in the SMTD but not located there.

Cleothera collaris Mulsant - Buquet, Melly, should be in BM, but not located there.

Cleothera flavida Mulsant - Bruck

Cleothera florifera Vogel - should be in the ZMHB but not located there.

Cleothera gemellata Mulsant - Bruck

Cleothera gracilis Mulsant - Germar and Schaum, should be in the ZMHB but not located there.

Cleothera graminicola Mulsant - Trobert

Cleothera laqueata Mulsant - Bruck

Cleothera maisonii Mulsant - Bruck

Cleothera millieri Mulsant - Trobert

Cleothera ormanceayi Mulsant - Germar and Schaum, Trobert, should be in the ZMHB but not located there.

Cleothera ovatonotata Mulsant - Trobert

Cleothera pallax Mulsant - Sallé

Cleothera pedicata Mulsant - Bruck

Cleothera ponderosa Mulsant - Bruck

Cleothera pretiosa Mulsant - Bruck

Cleothera proserpinae Mulsant - Bruck

Cleothera puella Mulsant - Bruck

Cleothera punctum Mulsant - Chevrolat, should be in the UMZC but not located there.

Cleothera quadrina Mulsant - Deyrolle, should be in the UMZC but not located there.

Cleothera septenaria Mulsant - Bruck

Cleothera subparallela Mulsant - Bruck

Cleothera turbata Mulsant - Germar and Schaum, should be in the ZMHB but not located there.

Cleothera vaticina Mulsant - Bruck

Cleothera venalis Mulsant - Bruck

Hyperaspis vetusta Weise - Should be in the ZMHB but not located there.

Cleothera vexata Mulsant - Should be in the UMZC but not located there.

Lectotypes for several species are designated herein to stabilize the current classification for future researchers.

LIST OF SOUTH AMERICAN HYPERASPIDINI

Diazonema Mulsant

1. *hypocrita* (Mulsant)
2. *fallax* Weise
3. *pubescens* (Weise)
4. *cavifrons* Weise (not South American)
5. *boothi*, n. sp.
6. *murilloi*, n. sp.
7. *eccentrica*, n. sp.

Menoscelis Mulsant

1. *saginata* Mulsant
2. *insignis* Mulsant

Thalassa Mulsant

1. *pentaspilota* (Chevrolat)
2. *flaviceps* Mulsant (not South American)
3. *similaris* Mulsant
4. *glauca* (Mulsant)

5. *korschefskyi* Milléo, Almeida & Gordon

6. *montezumae* Mulsant (not South American)

Clypeaspis, n. gen.

1. *trilineata* (Mulsant)

Prognataspis, n. gen.

1. *surreptiva*, n. sp.

Peruaspis, n. gen.

1. *paprzyckii*, n. sp.

2. *hypocrita*, n. sp.

Hyperaspis Redtenbacher

Section I

donzeli group

1. *latitibia*, n. sp.

2. *donzeli* Mulsant

3. *matronata* Mulsant

4. *helveola*, n. sp.

chapini group

5. *scutifera* Mulsant

6. *imitatrix*, n. sp.

7. *chapini*, n. sp.

onerata group

8. *cracentis*, n. sp.

9. *operaria* (Mulsant)

10. *limbigera* (Mulsant)

11. *bisignata*, n. sp.

12. *camargoi*, n. sp.

13. *biguttata* Sicard

14. *cleida* Mulsant

15. *tayronensis*, n. sp.

16. *pseudodonzeli*, n. sp.

17. *orthivora*, n. sp.

18. *zonula*, n. sp.

19. *brethesi*, n. sp.

20. *rosariensis*, n. sp.

21. *siladesma*, n. sp.

22. *octonotata*, n. sp.

23. *campbelli*, n. sp.

- 24. *colombiensis*, n. sp.
- 25. *dissidens*, n. sp.
- 26. *uninotata*, n. sp.
- 27. *onerata* (Mulsant)
- 28. *bicruciata* (Mulsant)

joannae group

- 29. *joannae*, n. sp.
- 30. *albopunctata* Crotch
- 31. *apicaspis*, n. sp.
- 32. *delicata* Almeida & Vitorino
- 33. *mimica*, n. sp.
- 34. *laterimacula*, n. sp.

howdeni group

- 35. *howdeni*, n. sp.
- 36. *chocoi*, n. sp.
- 37. *atra*, n. sp.
- 38. *recordata* Mulsant

Species not assigned to a group

- 39. *eupaleoides* Crotch
- 40. *mariposa*, n. sp.
- 41. *simlaensis*, n. sp.
- 42. *lindae*, n. sp.

Species known only from females

- 43. *c-nigrum* Mulsant
- 44. *sagittata* Crotch
- 45. *guilloryi* (Mulsant)
- 46. *pseudopavida*, n. sp.
- 47. *istmina*, n. sp.
- 48. *satipoensis*, n. sp.
- 49. *abertha*, n. sp.
- 50. *circumclusa*, n. sp.
- 51. *aemulata*, n. sp.
- 52. *dispar*, n. sp.
- 53. *histrionica* (Mulsant)

Section II

vredenburgi group

- 54. *ayacucho*, n. sp.
- 55. *herrerai*, n. sp.

- 56. *vredenburgi*, n. sp.
- 57. *festiva* Mulsant
- 58. *germainii* Crotch
- 59. *connectens* (Thunberg)

conclusa group

- 60. *ingrata* Mulsant
- 61. *funesta* (Germain)
- 62. *nana* Mader
- 63. *sphaeridoides* Mulsant
- 64. *conclusa* Weise
- 65. *arida*, n. sp.
- 66. *elegantissima* Brèthes
- 67. *longula* Weise
- 68. *prolata*, n. sp.

Tenuisvalvae Duverger

- 1. *unipunctata* (Crotch)
- 2. *peregrina* (Mulsant)
- 3. *deyrollei* (Crotch)
- 4. *notata* (Mulsant)
- 5. *bisquinquepustulata* (F.)
- 6. *ecoffeti* (Mulsant)
- 7. *parenthesis*, n. sp.
- 8. *caucaensis*, n. sp.
- 9. *bromelicola* (Sicard)
- 10. *gnoma*, n. sp.

SYSTEMATICS

Hyperaspidini Brèthes, 1923

Hyperaspidini: Brèthes, 1923: 454; WINGO 1952: 17; DUVERGER 2001: 222; VANDENBERG 2002: 383; DUVERGER 2003: 67.

Hyperaspidina Jacobson, 1916: 969.

Hyperaspini Costa, 1849: 9; WEISE 1885: 5; CHAPIN 1966: 278; GORDON 1985: 352; DUVERGER 1989: 146.

Description. Hyperaspidinae of small to medium size; form ranges from elongate oval, depressed, to rounded, convex. Dorsal surface glabrous except *Blaisdelliana* Gordon. Antenna short, with 9 to 11 articles; club elongate, fusiform, apical article small, re-

cessed in preceding article; antennal insertion exposed or concealed. Eye large, entire, not emarginated by an eye canthus (Figs. 7, 11), finely faceted, without pubescence. Maxillary palpus with apical segment securiform. Scutellum usually large. Epipleuron narrow, usually excavated for reception of femoral apices except *Hyperaspidius* Crotch and *Blaisdelliana*. Leg short; femur grooved or flattened for reception of tibia; protibia slender, unmodified, or expanded; tarsus cryptotetramerous; claws toothed or not. Abdomen without gland openings, with 6 visible sterna. Male genitalia with basal lobe asymmetrical, toothed, lobe rooted in phallobase (Figs. 75, 80). Female spermatheca compound, basal unit and apical portion connected by a short or long duct (Fig. 108); genital plate basically transverse (Fig. 108), or long, slender, stylus reduced or absent (Fig. 494).

R e m a r k s . Eight South American genera are recognized as belonging to Hyperaspidini: *Hyperaspis* Chevrolat, *Tenuisvalvae* Duvrger, *Thalassa* Mulsant, *Menoscelis* Mulsant, *Diazonema* Mulsant, *Clypeaspis*, new genus, *Prognataspis*, new genus, and *Peruaspis*, new genus. SICARD (1912) described *Helesius caseyi* from Colombia, but examination of a syntype of that species revealed that it is a member of *Cyra*. Therefore, *Helesius* is not currently known from South America.

Of Hyperaspidine genera, *Hyperaspis* contains by far the greater number of species and comprises the bulk of this study. *Hyperaspis*, *Tenuisvalvae*, *Menoscelis*, and *Diazonema* are completely revised, and *Clypeaspis*, *Prognataspis*, and *Peruaspis* newly described. *Thalassa* was treated by MILLÉO *et al.* (2004); therefore we provide only species key and new information.

Diazonema and *Clypeaspis* have 9 or 10-articled antennae with antennal bases concealed beneath the eye canthus, and strongly modified protibiae. *Thalassa*, *Menoscelis*, *Peruaspis*, *Hyperaspis*, and *Tenuisvalvae* have 10 or 11-articled antennae with antennal bases partially concealed and protibia unmodified or weakly modified in the latter three genera.

MULSANT's original (1850) classification of these taxa was sporadically altered by subsequent authors such as CROTCH (1874) and CHAPUIS (1876). Our investigations, for the most part, confirm Mulsant's original arrangement of taxa conceived more than 150 years ago.

Hyperaspidini and Brachiacanthini are distinguished by both external and genital characters. Hyperaspidini are distinguished by the

lack of an eye canthus, inner margin of eye smoothly rounded (this is an excellent character by which specimens are quickly distinguished from brachiacanthines); presence of a fine, basal pronotal line, and basomedian projection of pronotum truncate (not dependable characters). Male genitalia have parameres rooted inside basal piece. Female spermathecae are compound, lacking infundibulum and visible ramus, with a basal unit separated from apical portion by a duct.

Brachiacanthini are distinguished by having an eye canthus of varying size and shape extended from frons onto inner margin of eye, emarginate eye (R. Booth, pers. comm.); without basal pronotal line, basomedian projection of pronotum not truncate. Male genitalia with parameres attached to outer portion of basal piece (as typical for most Coccinellidae). Female genitalia of typical coccinellid type with single spermathecal capsule composed of ramus, nodulus, and cornu; with distinct infundibulum.

KEY TO GENERA OF HYPERASPIDINI

- 1. Postcoxal line on basal abdominal sternum incomplete, of *Scymnobi* type (Fig. 37) *Menoscelis* Mulsant
- Postcoxal line on basal abdominal sternum incomplete, of *Scymnus* (*Scymnus*) type (Fig. 66) 2
- 2(1). Labrum extended beyond clypeal apex, wide, apically truncate, dark brown, heavily sclerotized (Fig. 6); prosternal process prominent, raised (Figs. 4, 5) *Peruaspi*, n. gen.
- Labrum extended beyond clypeal apex or not, narrow, apically rounded, weakly sclerotized (Figs. 11, 12), yellow or pale brown; prosternal process not prominent (Figs. 10, 12) 3
- 3(2). Protibia angulate near base, posterior margin strongly flanged (Fig. 44) 4
- Protibia not angulate near base, flange on posterior margin present or absent 5
- 4(3). Antenna 9-articled (Fig. 25); frons on a distinctly higher plane than clypeus (Fig. 13); ground color of elytron usually pale red (except *murilloi* and *eccentrica*) *Diazonema* Weise
- Antenna 11-articled (Fig. 43); frons on a slightly higher

plane than clypeus; ground color of elytron black, with bluish or greenish lustre *Thalassa* Mulsant

- 5(3). Eye large, approximately as wide as median frontal area when viewed from front (Fig. 53); protibia distinctly flanged; abdominal sterna 3-5 with pit on each side near lateral margin *Prognataspis*, n. gen.

Eye small, frontal area 2 to 3 times wider than eye when viewed from front (Fig. 1); protibia flanged or not; abdominal sterna 3-5 without pit on each sided 6

- 6(5). Body elongate, nearly parallel sided, dorsoventrally flattened (Fig. 47); protibia distinctly flanged, flange narrow at base, widened toward apex (Fig. 2) *Clypeaspis*, n. gen.

Body elongate or rounded, not parallel sided, dorsoventrally flattened or not; protibia not flanged or feebly so (Figs. 9, 74) 7

- 7(6). Female genital plate short, subquadrate (Fig. 97); female abdominal sternum 6 apically convex; antenna with 10 or 11 articles; ultimate maxillary palpal article truncate; mandibular retinaculum slightly curved, apex acute
. *Hyperaspis* Chevrolat

Female genital plate long, slender (Fig. 494); female abdominal sternum 6 apically triangular; antenna with 11 articles; ultimate maxillary palpal article slightly emarginate; mandibular retinaculum strongly curved, apex rounded *Tenuisvalvae* Duverger

Genus *Diazonema* Weise, 1926

Diazonema Weise, 1926: 12; KORSCHESKY 1931: 202; BLACKWELDER 1945: 448; CHAPIN 1966: 279; MILLÉO & ALMEIDA 2000: 66 (as synonym of *Corystes*).

Corystes Mulsant, 1850: 506 (not *Corystes* Latreille, 1802); CROTCH 1874: 208; CHAPUIS 1876: 249; KORSCHESKY 1932: 267; BLACKWELDER 1945: 448; MILLÉO & ALMEIDA 2000: 66 (not *Corystes* Latreille, 1802).

Corystes (*Diazonema*): DUVERGER 1989: 146.

Type species: of *Corystes*, *Corystes hypocrita* Mulsant, by monotypy; of *Diazonema*, *Diazonema cavifrons* Weise, by subsequent designation of KORSCHESKY (1932).

Description. Hyperaspidini with form rounded, convex. Dorsal surface glabrous or pubescent. Elytral ground color variable. Elytron maculate or not. Antenna with 9 articles, basal article wider than long (Figs. 25, 31); antennal insertion concealed. Apical maxillary article straight apically; mandibulary retinaculum strongly curved, apex rounded. Clypeus short, narrow, slightly extended beyond frons, on lower plane than frons, abruptly joined to frons, apically emarginate (Figs. 13, 15). Frons widely flared, concealing antennal base. Labrum concealed beneath clypeus. Scutellum large, wider than long. Elytral epipleuron wide, not medially grooved, descending externally, excavated for reception of middle and hind femoral apices. Prosternal process slightly convex, with 2 carinae convergent toward base. Legs with tibiae short. Protibia short, wide, flattened, tibial groove strongly flanged, outer margin of flange slightly sinuate, flange as wide at base as apex, angulate near base (Fig. 26); meso- and metatibia narrow, medially emarginate, not flanged, with distinct tibial groove, angulate near base. Posterior margin of metasternum abruptly descending between coxa and lateral margin. Metendosternite with deep, V-shaped anterior border. Tarsal claw with basal tooth. Postcoxal line on basal abdominal sternum incomplete, of *Scymnus* (*Scymnus*) type (Fig. 17). Male apical abdominal sternum weakly modified. Apex of female abdominal sternum 6 rounded. Female genital plate transverse.

Remarks. *Diazonema* (as *Corystes*) was revised by MILLÉO & ALMEIDA (2000), and that publication should be referred to for detailed discussions and illustrations. We do not entirely agree with their conclusions regarding species synonymy. Therefore, we have reinstated some species names as valid taxa. Male genitalia are extremely similar in all *Diazonema* species, suggesting that only a single taxa exists, but external characters such as pubescence or lack of pubescence, and type of prosternal process, indicate there are six valid species.

A single specimen from Nicaragua, in the Natural History Museum, London collections, was examined but not identified. It is most similar to *D. fallax* and *D. hypocrita* but differs from both. Because it is a single specimen lacking any positively definitive character, we label it only as "*Diazonema* sp." in the hope that additional specimens will be found to clarify its taxonomic position.

Diazonema is most similar morphologically to *Menoscelis* (see remarks under that genus); it differs from all other genera of Hypera-

spidinae by a combination of short clypeus, strongly expanded frons on a higher plane than the clypeus, concealing antennal bases, 9-articled antenna, and short, compressed protibia.

We thank Roger Booth for informing us that *Corystes* Mulsant, 1850 is preoccupied by *Corystes* Latreille, 1802. Therefore, *Diazonema* Weise, 1926 becomes the next available name for this group of species.

KEY TO SPECIES OF *DIAZONEMA*

1. Elytron reddish yellow, immaculate, or with black border on lateral margin 3
 - Elytral ground color black, maculate 2
- 2(1). Elytron with single, oval, yellow spot on apical declivity (Fig. 24) 6. *murilloi*, n. sp.
 - Elytron with 3 red and yellow spots 7. *eccentrica*, n. sp.
- 3(1). Dorsal surface pubescent, pubescence composed of very short hairs 3. *pubescens* (Weise)
 - Dorsal surface glabrous 4
- 4(2). Head with frons and clypeus deeply dished, frons on a much higher plane than clypeus, with pronounced horns; Central America or Ecuador 5
 - Head with frons and clypeus slightly depressed, frons on a slightly higher plane than clypeus; not known from Central America 6
- 5(4). Frontal horns apically angulate; ventral surface reddish brown; Central America 4. *cavifrons* Weise
 - Frontal horns apically acute, brown; ventral surface mostly dark brown; Ecuador (Fig. 14) 5. *boothi*, n. sp.
- 6(4). Prosternal process strongly narrowed basally, abruptly widened apically; elytral apex narrowly yellow; northeastern and eastern South America 1. *hypocrita* (Mulsant)
 - Prosternal process slightly narrowed basally, slightly wider apically; elytral apex broadly yellow; Andean South America 2. *fallax* Weise

1. *Diazonema hypocrita* (Mulsant, 1850), **n. comb.**

Corystes hypocrita Mulsant, 1850: 507; CROTCH 1874: 208; KORSCHESKY 1932: 267; GORDON 1987: 26; MILLÉO & ALMEIDA 2000: 71.

Corystes (Corystes) hypocrita: DUVERGER 1989: 146.

Type locality. Cayenne (French Guiana).

Description. ♂, length 4.0 mm, width 3.6 mm; body form round, convex. Dorsal surface glabrous; head dull, alutaceous; pronotum dull, alutaceous; elytron shiny. Color yellow except pronotum with 5 reddish yellow spots, median spot widely separated from anterior margin, funnel shaped, with base narrow in front of scutellum, apex wide, basal triangular spot laterad of scutellum, triangular median spot in lateral 1/2; elytron pale red with narrow, yellow border on lateral and apical margins (Fig. 16); pro-, meso- and metasterna brownish yellow; abdomen dark brown except outer 1/8 yellowish brown. Head punctures fine, separated by a diameter or less. Pronotal punctures fine, larger than on head, separated by a diameter or less; elytral punctures slightly larger than pronotal punctures, separated by 1 to 3 times a diameter. Metasternal punctures slightly larger than on elytron, sparse, nearly absent. Punctures on abdominal sterna slightly larger than on elytra, sparse medially on basal sternum, dense, separated by less than a diameter on sterna 2-6; area on 1st abdominal sternum inside postcoxal arc shiny, impunctate. Clypeal apex narrow, deeply emarginate medially, not sinuate laterally, lateral angle abruptly rounded. Prosternum narrow, "pinched" at base, widened toward apex, sides straight, with carinae narrowly separated at apex, convergent toward base, extended 1/3 distance to basal sternal margin. Protibia short, wide, deeply grooved for reception of tarsus, posterior margin strongly flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/4 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum weakly emarginate. Genitalia with basal lobe 7/8 length of paramere, slender, sinuate, apex with one angle rounded, opposite angle acute; paramere slender, slightly widened to rounded apex in apical 1/2 (Fig. 18); siphon long, slender, evenly curved, basal capsule with inner arm short, abruptly recurved apically, outer arm absent, base of siphon knobbed (Figs. 19, 20).

♀. None examined.

Variation. Length 4.0 to 5.3 mm, width 3.6 to 4.8 mm.

Geographical distribution: Northeastern and eastern South America.

Specimens examined: 4. Brazil, "Amazons"; São Paulo; Surinam, "Cayenne", Uyttenboogaart (BM) (MHNL) (USNM).

R e m a r k s . *Diazonema hypocrita* seems to be an eastern South American taxa distinguished from other *Diazonema* species by key characters. It most nearly resembles the Peruvian *D. fallax*, but the dorsal punctures are finer and not as closely spaced as in *D. fallax*.

The lectotype designated here is in the Dejean collection and is labeled "Cayenne, Lacordaire."

2. *Diazonema fallax* Weise, 1926

Diazonema fallax Weise, 1926: 13; MILLÉO & ALMEIDA 2000: 71 (as synonym of *Corystes hypocrita*).

Type locality. Callanga, Peru (ZMHB), lectotype designated by MILLÉO & ALMEIDA (2000).

D e s c r i p t i o n . ♂, length 4.7 mm, width 4.4 mm; body form round, convex. Dorsal surface glabrous; head dull, alutaceous; pronotum alutaceous, shiny; elytron weakly alutaceous, shiny. Color yellow except pronotum with 5 reddish brown spots, median spot narrowly divided medially, forming triangular spot on each side, feebly connected to base by narrow stem, triangular, basolateral spot laterad of scutellum, indistinct median spot in lateral 1/2; elytron pale red with narrow, yellow border on lateral margin, border abruptly widened on apical margin; pro-, meso- and metasterna brownish yellow; abdomen dark brown except outer 1/8 yellowish brown. Head punctures fine, separated by less than a diameter. Pronotal punctures larger than on head, separated by less than a diameter; elytral punctures smaller than pronotal punctures, separated by 1 to 3 times a diameter. Metasternal punctures larger than on elytron, sparse medially, becoming coarser, separated by less than a diameter laterally. Punctures on abdominal sterna larger than on elytra, very coarse, somewhat dense medially on basal sternum, smaller, separated by less than a diameter on sterna 2-6; area on 1st abdominal sternum inside postcoxal arc slightly alutaceous, shiny, impunctate. Clypeal apex narrow, deeply emarginate medially, not sinuate laterally, lateral

angle abruptly rounded. Prosternum wide, slightly narrowed at base, slightly widened toward apex, sides weakly rounded, with carinae widely separated at apex, convergent toward base, extended nearly 1/2 distance to basal sternal margin. Protibia short, wide, deeply grooved for reception of tarsus, posterior margin strongly flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum weakly emarginate. Genitalia with basal lobe 7/8 length of paramere, slender, sinuate, apex with one angle rounded, opposite angle acute; paramere slender, slightly widened to rounded apex in apical 1/2; siphon long, slender, evenly curved, basal capsule with inner arm short, truncate apically, outer arm long, wide, apically knobbed.

♀. Similar to ♂ except apex of 6th abdominal sternum rounded. Genitalia with beak of basal unit apically rounded.

Variation. Length 4.5 to 4.7 mm, width 4.3 to 4.4 mm. Pronotal maculation may be indistinct, nearly invisible; elytral color pattern varies from that described above to forms with narrow to broadly black lateral elytral borders and mostly black epipleurae (Tingo Maria).

Geographical distribution: Peru.

Specimens examined: 10. Peru: Callanga; Sani Beni; Huanuco; Tingo Maria (CAS) (USNM) (ZMHB).

Remarks. *Diazonema fallax* was described from Peru, and all specimens examined have been from that country. This is apparently the species actually described by MILLÉO & ALMEIDA (2000) as *D. hypocrita* because the female genitalia agree with their illustration. It is distinguished from *D. hypocrita* by key characters as well as coarser, denser, dorsal and ventral punctation.

3. *Diazonema pubescens* (Weise, 1926), **n. comb.**

Corystes pubescens Weise, 1926: 34; KORSCHESKY 1932: 268; MILLÉO & ALMEIDA 2000: 71 (as synonym of *Corystes hypocrita*).

Type locality. Ecuador.

Description. ♀, length 5.5 mm, width 5.0 mm; body form round, convex. Dorsal surface entirely pubescent, pubescence short, golden, moderately dense; head and pronotum aluta-

ceous, slightly shiny; elytron shiny. Color yellow except head and pronotum dark yellow; elytron pale red with narrow, yellow border on lateral and apical margins; pro-, meso- and metasterna brownish yellow; abdomen reddish brown except outer 1/4 yellow. Head punctures coarse, separated by less than a diameter. Pronotal punctures smaller than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, sparse medially, becoming coarser, separated by less than a diameter laterally. Punctures on abdominal sternum larger than on elytra, coarse, sparse medially on basal sternum, smaller, separated by less than a diameter on sterna 2-6; area on 1st abdominal sternum inside postcoxal arc slightly alutaceous, shiny, finely, sparsely punctate. Clypeal apex wide, shallowly emarginate medially, sinuate laterally, lateral angle acute. Prosternum wide, slightly narrowed at base, slightly widened toward apex, sides straight, with carinae narrowly separated at apex, convergent toward base, extended nearly 1/2 distance to basal sternal margin. Protibia short, wide, deeply grooved for reception of tarsus, posterior margin strongly flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, rounded along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum weakly emarginate. Genitalia with beak of basal unit of spermatheca having apical projection, projection apically truncate.

♂. Not known.

Variation. None observed.

Geographical distribution: Ecuador and Peru.

Specimens examined: 4. Ecuador: Province Loja, Zamora; Peru: Junin, Chanchamayo, 1300 m (BM) (USNM) (NREA: holotype).

Remarks. This species is easily recognized by the unique dorsal pubescence, laterally sinuate clypeal apex, and pronotal punctures smaller than head punctures. Males were not available for examination; therefore male genitalia could not be comparatively assessed.

4. *Diazonema cavifrons* (Weise, 1903), **n. comb.**

Corystes cavifrons Weise, 1903: 208; MILLÉO & ALMEIDA 2000: 71 (as synonym of *Corystes hypocrita*).

Diazonema cavifrons: WEISE 1926: 12; KORSCHESKY 1931: 202.

Corystes (Diazonema) cavifrons: DUVERGER 1989: 146.

Type locality. Turrialba, Costa Rica (ZMHB) (lectotype designated by MILLÉO & ALMEIDA 2000).

Description. ♂, length 4.5 mm, width 4.0 mm; body form rounded, widest anterior to middle of elytra, convex. Dorsal surface glabrous; head slightly alutaceous, shiny; pronotum slightly alutaceous, shiny; elytron shiny. Color pale yellowish brown except head yellow with outer margins of frontal horns and clypeal apex light brown; pronotum with lateral 1/3 yellow, median 1/3 yellowish brown with oval, yellow spot near base on each side of middle; elytron with lateral margin slightly darker brown; propleuron, legs yellow. Head impunctate. Pronotal punctures fine, separated by less than to 3 times a diameter; elytral punctures smaller than pronotal punctures, separated by less than to 3 times a diameter. Metasternal punctures slightly larger than on elytron, sparse, widely separated. Punctures on abdominal sterna larger than on elytra, very coarse, somewhat dense medially on basal sternum, smaller, separated by less than a diameter on sterna 2-6; area on 1st abdominal sternum inside postcoxal arc slightly alutaceous, shiny, impunctate. Head triangularly depressed medially; clypeal apex narrow, emarginate medially, not sinuate laterally, lateral angle abruptly rounded; frontal horns greatly expanded, raised, tapered to acute apex. Prosternal process wide, pinched between coxae, widened toward apex, sides weakly rounded, with carinae widely separated at apex, convergent toward base, extended to apical margin of coxae. Protibia short, wide, deeply grooved for reception of tarsus, posterior margin strongly flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, rounded along margin, apex strongly recurved toward basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum convex. Genitalia as described for *D. hypocrita*.

♀ Similar to male. Female genitalia as described for *D. pubescens*.

Variation. Length 4.5 to 4.0 mm. Frontal horns may be reduced in size, somewhat flattened; pronotum with median yellow spots sometimes indistinct.

Geographical distribution: Costa Rica.

Specimens examined: 6. Costa Rica, "Costa Rica"; Honduras, "Honduras" (BM) (ZMHB).

Remarks. *Diazonema cavifrons* has the frontal area deeply dished as shown by the excellent photograph in MILLÉO & ALMEIDA (2000: p. 73, fig. 24), and the frons raised, forming "horns". This head structure differs from other *Diazonema* species except *D. boothi*. See remarks under that species.

5. *Diazonema boothi* n. sp.

Type material. Holotype ♂: Equador (sic), 52526, Buckley, *Corystes hypocrita* (handwritten), Fry Coll. 1905.100 (BM).

Description. ♂, length 5.2 mm, width 5.0 mm; body form round, convex (Fig. 21). Dorsal surface glabrous; head dull, alutaceous; pronotum alutaceous, dull; elytron shiny. Color yellow except head with outer margins of frontal horns and clypeal apex dark brown; pronotum with 5 indistinct brown spots, median spot narrowly divided medially, forming triangular spot on each side, feebly connected to base by narrow stem, triangular, basolateral spot laterad of scutellum; elytron pale reddish yellow, slightly paler toward lateral and apical borders (Fig. 21); pro-, meso- and metasterna dark brown, nearly black; mesoleg with trochanter, basal 2/3 of femur dark brown, metaleg with trochanter, basal 3/4 of femur dark brown; abdomen dark brown except basal sternum red medially, outer 1/4 of sterna 1-6 yellowish brown. Head punctures fine, separated by a diameter or less. Pronotal punctures slightly larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, separated by less than to twice a diameter medially, becoming coarser, separated by less than a diameter laterally. Punctures on abdominal sterna larger than on elytra, very coarse, somewhat dense medially on basal sternum, smaller, separated by less than a diameter on sterna 2-6; area on 1st abdominal sternum inside postcoxal arc slightly alutaceous, shiny, impunctate. Head medially depressed; clypeal apex narrow, emarginate medially, not sinuate laterally, lateral angle abruptly rounded; frontal horns greatly expanded, raised, tapered to acute apex (Fig. 14). Prosternum wide, slightly narrowed at base, slightly widened toward apex, sides weakly rounded, with carinae widely separated at apex, convergent toward base, extended nearly 1/2 distance to basal

sternal margin. Protibia short, wide, deeply grooved for reception of tarsus, posterior margin strongly flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex slightly recurved toward basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum convex. Genitalia with basal lobe 7/8 length of paramere, slender, sinuate, apex with one angle rounded, opposite angle acute; paramere slender, slightly widened to rounded apex in apical 1/2 (Fig. 22); siphon long, slender, evenly curved, basal capsule with inner arm short, truncate apically, outer arm long, wide (Fig. 23).

♀. Not known.

Etymology. This species is named for Roger Booth, a colleague who has contributed greatly to this and other coccinellid studies, both through loan of specimens and advice on numerous technical matters.

Remarks. *Diazonema boothi* (from Ecuador) resembles the Central American *Diazonema cavifrons*, but differs by having the head punctate; elytral punctures larger than pronotal punctures; metasternal punctures very large, dense; ventral surface mostly dark brown, nearly black; and postcoxal line on basal abdominal sternum flattened along apical sternal margin, apex slightly recurved toward basal margin. In *D. cavifrons* the head is impunctate; elytral punctures smaller than pronotal punctures; metasternal punctures small, sparse; ventral surface yellowish brown; and postcoxal line on basal abdominal sternum rounded along apical sternal margin, apex strongly recurved toward basal margin.

6. *Diazonema murilloi* n. sp.

Type material. Holotype ♂: Colombia, Val (Valle del Cauca), Rol-danillo, 966 m, 27.V.1939, Murillo No 5001 (USNM). Paratypes 4: 3, same data as holotype (USNM); 1, Colombia, Cnd (Cundinamarca), nr El Colegio, alt. 1600 m, 10.III.-'40, Murillo No 5363 (USNM).

Description. ♂, length 4.0 mm, width 3.6 mm; body round, convex. Dorsal surface with head alutaceous, shiny; pronotum and elytron slightly alutaceous, shiny. Color black except head yellow; pronotum with narrow apical margin and lateral 3/8 yellow; elytron with greenish sheen, 1 large, oval, yellow spot on apical declivity (Fig. 24); ventral surface reddish yellow except median area of

pro- and mesosternum, epipleuron black. Head punctures fine, separated by less than a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures slightly smaller than pronotal punctures, separated by a diameter or less. Metasternal punctures fine, sparse, nearly absent. Punctures on median area of basal abdominal sternum coarse, sparse, punctures on sterna 2-6 smaller than on basal sternum, separated by 1 to 3 times a diameter; area on 1st abdominal sternum inside postcoxal arc shiny, impunctate. Clypeal apex weakly emarginate, slightly sinuate laterally. Antenna with 9 articles (Fig. 25). Prosternum with intercoxal process narrow, pinched at base, widened apically, sides straight, carinae widely separated at extreme apex, abruptly narrowed toward base, forming long, apical stem, extended $3/4$ distance to basal sternal margin. Protibia short, wide, deeply grooved for reception of tarsus, posterior margin strongly flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, rounded along margin, apex recurved $1/4$ distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum truncate. Genitalia with basal lobe $7/8$ length of paramere, slender, sinuate, apex with one angle rounded, opposite angle acute, small, angulate projection on one side; paramere slender, lateral margins parallel to apex (Fig. 27); siphon long, robust, evenly curved, basal capsule with inner arm short, truncate apically, outer arm absent, base of siphon knobbed (Fig. 28).

♀ Not known.

Variation. Length 4.0 to 4.3 mm, width 3.6 to 3.7 mm. The paratype from El Colegio has the elytral spot on apical declivity small, irregularly rounded, reddish yellow.

Etymology. This species is named for L. M. Murillo, a Colombian entomologist who collected this type series as well as many more Colombian Coccinellidae.

Remarks. This species and *D. eccentrica* are the only species of *Diazonema* with basically black elytra. *Diazonema murilloi* is the only species having prosternal carinae with a long basal stem.

7. *Diazonema eccentrica* n. sp.

Type material. Holotype ♀: Colombia, Vaupes, River Vaupes, x.xii.1952, D. J. Taylor. D402 B.W/. I. C.R.S. Expedition Colom-

bia, Pred. on coccid. D. 376. on cacao, Com. Inst. Ent. Coll. No. 13110, ?*Thalassa* sp., Det. R.D. Pope 1953 (BM).

Description. ♀, length 2.7 mm, width 2.3 mm; body form round, convex. Dorsal surface with head, pronotum, and elytron shiny. Color black, head with median, elongate brown spot on vertex and frons; pronotum with narrow anterior margin and lateral 1/4 yellow; elytron with 3 spots, 1 large median, pale red spot extended from near base to apical declivity, 1 small, elongate oval, yellow spot medially on lateral margin, 1 yellow spot on margin at apex (elytron damaged, extent of spot not determined) (Figs. 29, 30); ventral surface, including abdomen, yellow except pro-, meso- and metasterna yellowish brown. Head punctures fine, separated by less than to twice a diameter. Pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures slightly larger than pronotal punctures, separated by 1 to 3 times a diameter. Metasternal punctures larger than on elytron, sparse medially, becoming denser laterally, separated by less than a diameter. Punctures on median area of basal abdominal sternum larger than on elytra, sparse, punctures fine, dense on sterna 2-6; area on 1st abdominal sternum inside postcoxal arc slightly alutaceous, weakly shiny, finely, sparsely punctate. Clypeal apex wide, deeply emarginate medially. Prosternum narrow, carinae narrowly separated at apex, convergent toward base, extended 4/5 distance to basal margin, not basally stemmed, not reaching basal margin of sternum. Postcoxal line on 1st abdominal sternum extended to posterior margin, flattened along margin, recurved 1/5 distance to basal sternal margin. Fifth sternum with apex truncate; 6th sternum rounded. Genitalia of the *Hyperaspis* type with beak of basal unit elongate, wide; connecting duct long (Fig 32).

♂ Not known.

Etymology. The specific name is the Latin *eccentricus*, meaning different, odd, referring to the different appearance of this species compared to other species of *Diazonema*.

Remarks. Like *D. murilloi*, this species is an atypical member of *Diazonema* because of the black elytral ground color and distinct maculation. It is also the smallest species in the genus and has female genitalia of the *Hyperaspis* type. The holotype lacks the left elytron and apical portion of the right elytron.

Genus *Menoscelis* Mulsant, 1850

Menoscelis Mulsant, 1850: 508; CROTCH 1874: 209; CHAPIN 1966: 279; EL-ALI 1972: 23.

Menoscelis (*Thalassa*): CHAPUIS 1876: 228.

Thalassa (*Menoscelis*): KORSCHESKY 1931: 208; BLACKWELDER 1945: 449; DUVERGER 1989: 146.

Type species: *Menoscelis saginata*, by subsequent designation of CROTCH (1874).

Description. Hyperaspidini with form rounded, convex. Dorsal surface glabrous. Elytron maculate. Antenna with 11 articles, basal article wider than long (Fig. 36); antennal insertion concealed. Apical maxillary article straight apically; mandibulary retinaculum strongly curved, apex rounded. Clypeus short, wide, on lower plane than frons, abruptly joined to frons, lateral angle abruptly rounded, apically emarginate. Frons flared, concealing antennal base. Labrum concealed beneath clypeus. Scutellum large, as wide as long. Elytral epipleuron wide, not medially grooved, obliquely descending externally, excavated for reception of middle and hind femoral apices. Prosternal process convex, with 2 carinae convergent toward base. Legs with tibiae long. Protibia narrow, flattened, medially emarginate, tibial groove deep, long, not or slightly flanged posteriorly, angulate near base (Fig. 38, 39); meso- and metatibia narrow, medially emarginate, not flanged, with shallow tibial groove. Posterior margin of metasternum abruptly descending between coxa and lateral margin. Metendosternite with deep, V-shaped anterior border. Tarsal claw with basal tooth. Postcoxal line on basal abdominal sternum incomplete, of *Scymnobi* type (Fig. 37). Male apical abdominal sternum weakly modified. Apex of female abdominal sternum 6 rounded. Female genital plate transverse.

Remarks. *Menoscelis* has been variously considered a valid genus or subgenus. MULSANT (1850) described it as a genus; CROTCH (1874) and CHAPIN (1966) followed suit. CHAPUIS (1876) considered it a genus with *Thalassa* a subgenus; KORSCHESKY (1931) reversed that opinion followed by DUVERGER (1989).

It is structurally most similar to *Thalassa* and *Diazonema*, but differs by the tibia long relative to femoral length, and a *Diomus* type of postcoxal abdominal line.

KEY TO SPECIES OF *MENOSCELIS*

1. Length 9.0 mm; elytron light reddish brown with 5 yellow spots (Fig. 33) 2. *insignis* Mulsant
- Length less than 6.0 mm; elytron yellow with 3 brown spots (Fig. 34) 1 *saginata* Mulsant

1. *Menoscelis saginata* Mulsant, 1850

Menoscelis saginata Mulsant, 1850: 508; CROTCH 1874: 209.

Menoscelis (*Thalassa*) *saginata*: CHAPUIS 1876: 228.

Thalassa (*Menoscelis*) *saginata*: KORSCHESKY 1931: 208; BLACKWELDER 1945: 449.

Thalassa (*Monoscelis* (sic!)) *saginata*: ORIVEL *et al.* 2004: 97 (biology).

Type locality. Cayenne (French Guiana) (MNHL, lectotype here designated).

Description. ♂, length 5.8 mm, width 5.2 mm; body form round, convex. Dorsal surface with head slightly alutaceous, shiny; pronotum and elytron shiny. Color yellow except pronotum with H-shaped, median dark brown macula, macula with obliquely oval, yellow spot on each side of middle; elytron with 3 reddish brown spots, transversely rounded, 1 discal spot on sutural margin anterior to middle paired with spot on opposite elytron, forming large, transverse discal macula, 1 small spot on humeral callus, 1 small spot posterior to humeral callus near lateral margin (Figs. 34, 35); pro-, meso-, and apex of metasternum black. Head punctures coarse, separated by less than a diameter. Pronotal punctures smaller than on head, separated by less than to twice a diameter; elytral punctures slightly larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures larger than on elytron, sparse medially, separated by 1 to 2 times a diameter, becoming dense laterally, separated by a diameter or less. Punctures on median area of basal abdominal sternum larger than on elytra, sparse, punctures fine, dense on sterna 2-6; area on 1st abdominal sternum inside postcoxal arc slightly alutaceous, weakly shiny, finely, sparsely punctate. Clypeal apex wide, deeply emarginate medially. Prosternum narrow, carinae narrowly separated at apex, convergent, extended 1/2 distance to basal margin, basally

stemmed, stem long, reaching basal margin of sternum. Postcoxal line on 1st abdominal sternum joining posterior margin at lateral 1/3. Fifth sternum broadly, weakly emarginate apically; 6th sternum truncate. Genitalia with basal lobe 1/2 length of paramere, wide, sinuate, apex with one angle rounded, opposite angle acute, large, angulate projection on one side; paramere wide, slightly narrowed to rounded apex, inner margin sinuate (Fig. 40); siphon long, robust, evenly curved, basal capsule with inner arm short, truncate apically, outer arm shorter than inner arm, base of siphon sinuate (Fig. 41).

♀. Not known.

Variation. None observed.

Geographical distribution: French Guiana and Peru.

Specimens examined: 3. French Guiana: "Cayenne" (the lectotype). Peru: Satipo (MNHL) (USNM).

Remarks. As indicated in the key to species, *M. saginata* and *M. insignis* are radically different in size and dorsal coloration. CROTCH (1874) synonymized the two names stating that "*M. saginata* appears to me a pale variety of *insignis*, the quadrate common spot is identical in both, and all details of structure and punctuation." From that statement it is clear that Crotch had not seen a specimen of *M. insignis* nor read the original description. Mulsant's (1850) original description clearly defines the differences between *M. insignis* and *M. saginata*. KORSCHESKY (1931) listed *M. insignis* as an aberration of *M. saginata* and BLACKWELDER (1945) followed the same classification. This seemingly strange situation is perhaps explained by CROTCH's (1874) use of the name *insignis* for a species of *Hyperaspis* bearing a remarkable resemblance to *M. saginata*. KORSCHESKY (1931) inadvertently confused these two taxa in his catalogue of the Coccinellidae, a situation perpetuated by subsequent authors.

Only two specimens have been examined: the holotype from French Guiana and a specimen from Peru. In spite of the widely different geographic locations, the two specimens are identical in all respects.

The lectotype of *M. saginata* is here designated to stabilize future usage of this name. It is labeled "Cayenne, Lacordaire."

2. *Menoscelis insignis* Mulsant, 1850

Menoscelis insignis Mulsant, 1850: 509; CROTCH 1874: 209.

Menoscelis (*Thalassa*) *saginata*: CHAPUIS 1876: 228.

Thalassa (*Menoscelis*) *saginata* ab. *insignis*: KORSCHESKY 1931: 208; BLACKWELDER 1945: 449.

Type locality: Cayenne (French Guiana) (UMZC).

Description. ♀, length 7.5 mm, width 6.5 mm; body form round, convex. Dorsal surface with head alutaceous, dull; pronotum slightly alutaceous, shiny; elytron shiny. Color yellow except pronotum with median 1/3 reddish brown, reddish brown area with 3 yellow spots, 1 small, triangular, anteromedian spot, and 2 larger, oval basal spots; elytron reddish brown with 5 large yellow spots (Fig. 33), scutellar spot triangular, humeral spot c-shaped around humeral callus, discal spot obliquely transverse, posterolateral spot oval, and apical spot irregularly rounded. Head punctures fine, separated by less than a diameter. Pronotal punctures equal in size to head punctures, separated by a diameter or less; elytral punctures equal in size to head punctures, separated by a diameter or less. Metasternal punctures very coarse, much larger than on elytron, absent medially, dense laterally, separated by less than a diameter. Punctures on median area of basal abdominal sternum larger than on elytron, sparse, punctures fine, dense on sterna 2-6; area on 1st abdominal sternum inside postcoxal arc slightly alutaceous, weakly shiny, finely, sparsely punctate. Clypeal apex wide, weakly emarginate medially. Prosternum narrow, carinae narrowly separated in basal 2/4, widened apically between coxae. Postcoxal line on 1st abdominal sternum joining posterior margin at lateral 1/3. Fifth sternum truncate apically; 6th sternum apically arcuate.

♂ Not known.

Variation. None observed.

Geographical distribution: French Guiana.

Specimens examined: 1. The holotype specimen.

Remarks. See remarks under *M. saginata*. The ♀ type specimen examined is considered a holotype because it is clear from the original description that Mulsant had only one type specimen. The holotype is damaged and has been repaired at least once in its history; therefore, genitalia were not dissected because of possible further damage.

Genus *Thalassa* Mulsant, 1850

Thalassa Mulsant, 1850: 511; CROTCH 1874: 209; KORSCHESKY 1931: 208; BLACKWELDER 1945: 449; EL-ALI 1972: 32; MILLÉO *et al.* 2004: 395.

Type species: *Thalassa pentaspilota* Chevrolat, 1835, by subsequent designation of CROTCH 1874.

Description. Hyperaspidini with form rounded, convex. Dorsal surface glabrous, alutaceous, dull. Elytral ground color usually dark blue, or dark blue with greenish lustre. ♂ head mostly yellow, ♀ head black or reddish yellow with black maculation. Elytron maculate or not. Antenna with 11 articles, basal article wider than long (Fig. 43); antennal insertion concealed. Frons on a slightly higher plane than clypeus. Apical maxillary article slightly emarginate apically; mandibular retinaculum strongly curved, apex rounded. Clypeus long extended beyond frons, abruptly joined to frons, lateral angle abrupt near apex, emarginate apically (Fig. 42). Labrum short, narrow, weakly sclerotized, yellowish brown. Scutellum large, wider than long. Elytral epipleuron wide, not medially grooved, descending externally, excavated for reception of middle and hind femoral apices. Prosternal process flat, with 2 short, parallel carinae. Protibia wide, flattened, tibial groove strongly flanged, outer margin of flange sinuate, flange as wide at base as apex (Fig. 44); meso- and metatibia narrow, medially emarginate, not flanged (Figs. 45, 46). Posterior margin of metasternum abruptly descending between coxa and lateral margin. Metendosternite with deep, V-shaped anterior border. Tarsal claw with basal tooth. Postcoxal line on basal abdominal sternum incomplete, of *Scymnus* (*Scymnus*) type. ♂ apical abdominal sternum weakly modified. Apex of ♀ abdominal sternum 6 rounded. ♀ genital plate transverse.

Remarks. *Thalassa* was revised by MILLÉO *et al.* (2004). Therefore, we provide only a modified key to species and an annotated species list. See MILLÉO *et al.* (2004) for detailed descriptions and illustrations.

Thalassa is most similar morphologically to *Diazonema* but is distinguished by the 11-articled antenna, frons only slightly raised above clypeus, and long protibia.

KEY TO SPECIES OF *THALASSA*

- 1. Elytron maculate 2
- Elytron immaculate 4
- 2(1). Elytron with single yellow, apical spot.
- 1. *pentaspilota* (Chevrolat)
- Elytron with 1 or 2 yellow, discal spots. 3
- 3(2). Elytron with 2 yellow, discal spots. 5. *korschefskyi* Milléo *et al.*
- Elytron with single, quadrangular spot on disc
- 6. *montezumae* Mulsant
- 4(1). Pronotum with anterior and lateral margin narrowly dark yellow. 3. *similaris* Mulsant
- Pronotum with only lateral margin yellow. 5
- 5(4). Pronotum with lateral margin very narrowly yellow
- 2. *flaviceps* Mulsant
- Pronotum with lateral 1/4 yellow 4. *glaucia* Mulsant

1. *Thalassa pentaspilota* (Chevrolat, 1835)

Chilocorus pentaspilotus Chevrolat, 1835: 124.
Thalassa pentastigma: Mulsant 1850: 512.
Thalassa pentaspilota: Crotch 1874: 209; Gordon 1987: 26; Milléo *et al.* 2004: 397.

Geographic distribution: Mexico and Venezuela. Blackwelder (1945) also lists Guatemala and Cuba; Guatemala is probably correct, Cuba probably incorrect.

South American specimens examined: 9. Venezuela: Aragua, Boca del Rio; Carabobo, Marciara; Carabobo, Yuma (USNM).

Remarks. This is an easily recognized species because of the single, apical yellow spot on each elytron. The distribution (Mexico and Venezuela) is very disjunctive, but an accidental introduction of live specimens from Mexico to Venezuela may be an explanation. Lectotype designated by Gordon (1987).

2. *Thalassa flaviceps* Mulsant, 1850

Thalassa flaviceps Mulsant, 1850: 513; MILLÉO *et al.* 2004: 397.

Thalassa prasina Mulsant, 1850: 516; CROTCH 1874: 209 (as synonym of *T. flaviceps*).

Geographic distribution: Cuba.

South American specimens examined: 1. Cuba, Havana (CAS).

3. *Thalassa similaris* Mulsant, 1850

Thalassa similaris Mulsant, 1850: 514; GORDON 1987: 26; MILLÉO *et al.* 2004: 398.

Geographic distribution: "New Grenada" (Colombia or Venezuela).

South American specimens examined: 2. The lectotype (GORDON 1987) labeled "n. gr.," meaning Colombia or Venezuela (UMZC); Guyana, Georgetown (BM).

R e m a r k s . This species is easily distinguished from the similar *T. glauca* by the narrowly yellow pronotal borders.

4. *Thalassa glauca* (Mulsant, 1850)

Menoscelis glauca Mulsant, 1850: 510.

Thalassa glauca: CROTCH 1874: 510; MILLÉO *et al.* 2004: 399.

Geographic distribution: Guatemala and Costa Rica south to Colombia and Brazil.

South American specimens examined: 4. Brazil: São Paulo, Cantareira; Jaú.; Colombia: no locality (BM) (UMZC) (USNM).

R e m a r k s . This is a widely distributed species whose distribution appears disjunct. The disjunction is probably not real, but an artifact of the scarcity of specimens in collections.

5. *Thalassa korschefskyi* (Milléo, Almeida & Gordon, 2004)

Hyperaspis korschefskyi Milléo, Almeida & Gordon, 2004: 399.

South American distribution: Colombia, no locality (holotype).

R e m a r k s . This species is known only from the holotype specimen (USNM).

6. *Thalassa montezumae* Mulsant, 1850

Thalassa montezumae Mulsant, 1850: 512; GORDON 1985: 400; MILLÉO *et al.* 2004: 398.

Geographic distribution: United States, Mexico, and Guatemala.

South American specimens examined: none.

Clypeaspis n. gen.

Type species: *Hyperaspis trilineata* Mulsant (by monotypy and present designation).

D e s c r i p t i o n . Hyperaspidini with form elongate, parallel sided, dorsum glabrous. ♂ head mostly yellow, ♀ head black or brown. Elytron maculate. Antenna with 10 articles, basal article wider than long; antennal insertion concealed. Apical maxillary article slightly emarginate apically; mandibular retinaculum strongly curved, apex rounded. Clypeus and frons joined at abrupt angle, clypeal apex emarginate; frons raised slightly above plane of clypeus, partially concealing antennal base (Fig. 1). Labrum short, narrow, weakly sclerotized, yellowish brown. Scutellum large, wider than long. Elytral epipleuron narrow, medially grooved, excavated for reception of middle and hind femoral apices. Prosternal process slightly raised, with 2 carinae (Fig. 3). Protibia wide, straight, not sinuate or emarginate, tarsal groove flanged on posterior margin (Fig. 2); meso- and metatibia wide, straight, slightly flanged on posterior margin. Posterior margin of metasternum abruptly descending between coxa and lateral margin. Metendosternite with anterior tendons of fork curved toward middle. Tarsal claw with basal tooth. Postcoxal line on basal abdominal sternum incomplete, of *Scymnus* (*Scymnus*) type. Male apical abdominal sternum weakly modified. Apex of female abdominal sternum 6 rounded. Female genital plate transverse.

Etymology. The generic name is a combination of the first part of "clypeus" and the ending of *Hyperaspis*, referring to the modified clypeus and relationship to *Hyperaspis*.

R e m a r k s . *Clypeaspis* belongs to the group that includes *Diazonema*, *Menoscelis*, and *Thalassa* because of the wide basal antennal segment, antennal insertion concealed beneath clypeus, and frons on a higher plane than clypeus. It is distinguished from these genera by the protibial flange narrow at the base, widened toward apex, tibia without basal angulation, and narrow epipleuron.

1. *Clypeaspis trilineata* (Mulsant, 1850), **n. comb.**

Hyperaspis trilineata Mulsant, 1850: 667; CROTCH 1874: 227; KORSCHESKY 1931: 198; GORDON 1987: 29.

Type locality. Cayenne (French Guiana).

D e s c r i p t i o n . ♂, length 3.4 mm, width 2.2 mm; body form elongate, parallel sided, flattened. Dorsal surface alutaceous, dull. Color reddish yellow except vertex of head black; pronotum with large, square, black basomedian spot in median 1/3; elytron with black vitta on sutural margin, vitta wide at base, narrowed to apical 1/8, wide, irregular black vitta extended from basal margin across humeral angle onto apical declivity, vitta slightly widened from base toward apex (Figs. 47, 48); venter of head, pro-, meso-, metasterna black; abdomen black except outer 1/3 and sterna 5-6 reddish yellow. Head punctures fine, distinct, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures slightly larger than on elytron, nearly absent medially, larger, separated by a diameter near lateral margin. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, finely, sparsely punctured. Clypeal apex deeply emarginate. Epipleuron oblique, grooved internally, slightly descending externally, femoral excavations deep. Prosternum with intercoxal carinae narrowly separated, parallel toward base, extended to basal 5/8, not stemmed, not reaching basal margin. Protibia

flanged, flange narrowest at base, becoming wider toward apex (Fig. 2). Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex truncate; 6th sternum truncate. Genitalia with basal lobe 1/2 length of paramere, obliquely rounded apically, with large, angulate projection on one side; paramere wide, tapered to rounded apex in apical 1/2 (Fig. 49); siphon short, robust, apically straight, with membranous area, basal capsule with inner arm long, slender, outer arm wider, slightly longer than inner arm, base emarginate (Figs. 50, 51).

♀. Similar to male except head dark brown. Genitalia with beak of basal unit long, wide; connecting duct short (Fig. 52).

Variation. Length 2.8 to 3.7 mm, width 2.0 to 2.7 mm. Dorsal and ventral black areas often dark brown.

Geographical distribution: South America and Caribbean islands.

Specimens examined: 34. Argentina: Chaco, Dep. Resistencia; Salta, Oran. Brazil: Pará, Belém. British West Indies: Barbados. Venezuela: Aragua, El Limon; Caracas Valley, Los Ruices; Rio Yacucuy Valley, Chivacoa; Suapure, Caura R (MBR) (USNM).

Remarks. The distribution pattern of this species, based on specimens examined, is somewhat odd. Nearly all specimens examined were collected on Barbados, with only a few from South America and none from Trinidad.

Type material could not be located. MULSANT (1850) stated that his specimen(s) were from the Buquet collection. Most material from that collection is in the BM, but specimens of *C. trilineata* could not be found.

***Prognataspis* n. gen.**

Type species: *Prognataspis surreptiva* n. sp.

Description. Hyperaspidini with form nearly round, dorsum glabrous. ♂ head yellow, ♀ head unknown. Elytron maculate. Antenna with 9 articles, basal article wider than long (missing from illustration) (Fig. 54); antennal insertion not concealed. Eye large, nearly as wide as median frontal area. Apical maxillary

article not emarginate apically. Frons narrow. Clypeus and frons joined at abrupt angle; clypeus narrow, clypeal apex emarginate; frons on same plane as clypeus, not concealing antennal base (Fig. 53). Labrum short, narrow, heavily sclerotized, brown. Scutellum large, wider than long. Elytral epipleuron broad, medially grooved, excavated for reception of middle and hind femoral apices. Prosternal process slightly raised, with 2 carinae (Fig. 55). Protibia wide, straight, not sinuate or emarginate, tarsal groove flanged on posterior margin (Fig. 57); meso- and metatibia narrow, straight, not flanged on posterior margin. Posterior margin of metasternum gradually descending between coxa and lateral margin. Abdominal sterna 3-5 with pit near lateral margin on each side. Tarsal claw with basal tooth. Postcoxal line on basal abdominal sternum incomplete, of *Scymnus* (*Scymnus*) type (Fig. 56). Male apical abdominal sternum 5 weakly modified.

Etymology. The generic name is a combination of the Latin *prognatus*, and the ending of *Hyperaspis*, referring to the unusually distinctive protruding mouthparts, and relationship to *Hyperaspis*.

Remarks. *Prognataspis* is characterized by the large eyes nearly as wide as median frontal area (usually the frontal area is two or three times as wide as eye); 9-articled antenna; very narrow clypeus and labrum; flanged protibia; and abdominal sterna 3-5 with pit on each side near lateral margin.

1. *Prognataspis surreptiva* n. sp.

Type material. Holotype ♂: Ecuador, 80 km NW Quito, 1300 m, PACTO, 26.2-2.3.2002, leg. Marek Halada (CCM).

Description. ♂, length 2.6 mm, width 2.4 mm; body nearly round, very convex. Dorsal surface shiny. Color black except head yellow; pronotum with lateral 1/3 and apical 1/4 yellow, elytron with single large, yellow spot medially in apical 1/2, spot tapered at apical and posterior ends (Figs. 61, 62); antenna, labial palpi, propleuron yellow; labrum dark brown; legs yellowish red except femora darker; epipleuron, pro-, meso-, and metasterna black; abdomen dark reddish brown. Head punctures fine, separated by less than diameter; pronotal punctures slightly larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, sepa-

rated by less than to twice a diameter. Metasternal punctures much larger than on elytron, nearly absent medially, becoming dense, contiguous near lateral margin. Punctures on basal abdominal sternum much than larger than on elytra, coarse, dense medially, becoming smaller, less dense laterally; sterna 2-6 with dense punctures becoming progressively smaller and denser from sternum 2 through sternum 6; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeus narrow, apex deeply emarginate, clypeus and frons joined at abrupt angle. Eye nearly as wide as median frontal area in frontal view. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Prosternum with intercoxal carinae widely separated at apex, convergent from apex toward base, basally stemmed. Protibia wide, flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, rounded along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum deeply emarginate. Genitalia with basal lobe long, slightly shorter than paramere, apex irregularly rounded, with truncated projection on one margin; paramere slender, abruptly narrowed at basal 1/2, tapered from basal 1/3 to rounded apex (Fig. 58); siphon slender, long, apex sinuate, basal capsule with inner arm irregular, apically widened, slightly knobbed, outer arm shorter than inner, truncate apically (Figs. 59, 60).

♀ Not known.

Variation. None observed.

Etymology. The species name is from the Latin *surreptivus*, meaning false or fraudulent, referring to the deceptive resemblance to many *Hyperaspis* species.

Remarks. Generic characters readily identify this taxon, which otherwise looks very much like a *Hyperaspis* species.

***Peruaspis* n. gen.**

Type species: *Peruaspis paprzyckii* n. sp.

Description. Hyperaspidini with form elongate, rounded, dorsum glabrous. Elytron maculate. Antenna with 10 articles, basal article wider than long (Fig. 65). Clypeus short; frons and clypeus smoothly, obliquely joined, clypeal apex weakly emarginate; frons

on same plane as clypeus, partially concealing antennal base (Fig. 6). Labrum short, wide, strongly sclerotized (Figs. 4-6). Scutellum large, as wide as long. Elytral epipleuron narrow, flat, slightly grooved medially, excavated for reception of middle and hind femoral apices. Prosternal process raised, prominent, sides ridged (Figs. 5, 6). Protibia narrow, straight, slightly flanged on posterior margin (Fig. 70); meso- and metatibia narrow, straight, slightly flanged on posterior margin. Posterior margin of metasternum abruptly descending between coxa and lateral margin. Tarsal claw with basal tooth. Postcoxal line on basal abdominal sternum incomplete, of *Scymnus* (*Scymnus*) type (Fig. 66). Apex of ♀ abdominal sternum 6 rounded. ♀ genital plate transverse.

Etymology. The generic name is a combination of "Peru" and the ending of *Hyperaspis*, referring to the country of origin of both known species.

Remarks. The labial and prosternal structures of this genus differ widely from those of other hyperaspine genera. The labrum is heavily sclerotized, wide, and extended beyond the clypeal apex. The prosternal process and middle of prosternum are prominently raised, particularly so in *P. paprzyckii*. Size difference and dorsal coloration between the 2 included species is extreme, but both share the diagnostic labial and prosternal characters.

♂♂ are unknown for either species. Both are Peruvian species, *P. paprzyckii* from a high altitude Andean locality, and *P. hypocrita* from low altitude on the eastern slope of the Andes.

KEY TO SPECIES OF *PERUASPIS*

1. Length less than 2.5 mm; color black, elytron with 2 yellow spots (Figs. 63, 64) 1. *paprzyckii*, n. sp.
- Length more than 3.0 mm; color mostly yellow with black maculae (Figs. 68, 69) 2. *hypocrita*, n. sp.

1. *Peruaspis paprzyckii* n. sp.

Type material. Holotype ♀: Peru, Satipo, XI, 1942, Paprzycki (USNM). Paratype: same data as holotype (USNM).

Description. ♀, length 2.1 mm, width 1.7 mm; body oval, convex. Dorsal surface shiny except head dull, alutaceous; pronotum and elytra shiny. Color black except head irregularly mottled with yellow across vertex and frons, clypeus brown; pronotum with lateral 1/3 yellow, inner margin of yellow area arcuate; elytron with 2 yellow spots, irregularly rounded spot at middle of elytron, and irregularly transverse subapical spot (Figs. 63, 64); antenna and labial palpi brownish yellow; narrow outer border of propleuron yellow; proleg yellowish brown, ventral surface dark brown. Head punctures distinct, separated by 1 to 2 times a diameter. Pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures as large as on elytron, separated by more than a diameter medially, dense, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, impunctate. Clypeus short, apex slightly emarginate; labrum protruding anterior to clypeal apex, labrum heavily sclerotized, dark brown, shiny, apex slightly emarginate. Epipleuron flat, slightly grooved medially, slightly descending externally, femoral excavations deep. Antenna with 10 articles. Prosternum with intercoxal process raised, medially concave, with central carina. Protibia not flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, rounded along margin, apex recurved 1/5 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate. Genitalia with beak of basal unit large, long; connecting duct short (Fig. 67).

♂. Not known.

Variation. Head of paratype entirely black.

Etymology. The species is named for the collector of the type series.

Remarks. *Peruaspsis paprzyckii* is a small, 2-spotted species similar to *Hyperaspis bisignata* and *H. camargoi* in color pattern.

2. *Peruaspsis hypocrita* n. sp.

Type material. Holotype ♀: Peru, Madre de Dios, Tambopata Wildlife Res., 30 km SW Pto. (Puerto) Maldonado (sic !), 12 50'S, 69 20'W; 290 m, 6 XII 1982, Joseph J. Anderson (CMP).

Description. ♀, length 3.3 mm, width 2.7 mm; body rounded, slightly oval, convex. Dorsal surface with head slightly alutaceous, shiny; pronotum shiny; elytra shiny. Color yellow except pronotum with large, black, obtriangular spot on each side of middle in basal 1/2; elytron narrowly bordered with black, with 3 black spots, 1 spot connected to suture anterior to middle, spot in conjunction with spot on opposite elytron forming large, cordate spot, 1 large, irregularly rounded spot on humeral callus, 1 large, irregularly rounded spot medially on apical declivity (Figs. 68, 69); venter of head, pro-, meso- and metasterna, femoral bases black; abdominal sterna 1-4 black except lateral 1/3 and sterna 5-6 yellow. Head punctures coarse, separated by less than a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, becoming dense, contiguous laterally. Punctures on abdominal sterna larger than on elytra, dense medially, becoming contiguous laterally, less coarse on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc shiny, nearly impunctate. Clypeus short, apex slightly emarginate; labrum protruding anterior to clypeal apex, labrum heavily sclerotized, black, shiny, apex slightly emarginate. Epipleuron oblique, slightly grooved internally, weakly descending externally, femoral depressions deep. Clypeal apex deeply emarginate. Protibia narrow, not flanged, with tarsal groove deep, basal end of groove projecting. Prosternum raised, with intercoxal carinae narrowly separated, parallel in apical 2/3, joined apically, stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, slightly rounded along margin, apex angled 1/4 distance to basal sternal margin. Fifth sternum with apex feebly emarginate. Genitalia with beak of basal unit long; connecting duct long (Fig. 71) (genital plates not shown).

♂ Not known.

Etymology. The specific name is the Latin *hypocrita*, meaning mime, player, referring to the resemblance to *Hyperaspis onerata*.

Remarks. *Peruaspis hypocrita* is a large species whose dorsal color pattern is similar to that of *H. onerata*.

Genus ***Hyperaspis*** Chevrolat in Dejean, 1833

Hyperaspis Chevrolat in Dejean, 1833: 435; MULSANT 1850: 649; CROTCH 1874: 224; KORSCHESKY 1931: 177

Type species: *Coccinella reppensis* Herbst, by subsequent designation of CROTCH 1874.

Gordoni Duverger, 2001: 226. (**n. syn.**)

Aliana Duverger, 2001: 226. (**n. syn.**)

Description. Hyperaspidini with form elongate, oval, or rounded, dorsoventrally flattened or convex; dorsum glabrous. Head usually yellow in male, at least partially brown or black in female. Elytron with pale maculation on dark background or dark maculation on pale background, rarely immaculate. Antenna with 10 or 11 articles (Figs. 92, 103, 136, 146, 170, 179, 194, 217, 223, 228, 238, 251, 257, 269, 287, 314, 321, 334, 341, 344, 349, 359, 363, 369, 375, 381, 397, 404, 413, 424, 441, 453, 467, 476, 483), basal article longer than wide; antennal insertion exposed. Apical maxillary article slightly emarginate apically; mandibular retinaculum strongly curved, apex rounded. Clypeus usually long, abruptly or obliquely, smoothly joined to frons laterally (Figs. 7, 11), distinctly emarginate apically, often concealing all or most of labrum. Labrum short, narrow (Figs. 11, 12), weakly sclerotized, yellow or yellowish brown. Scutellum large, wider than long. Elytral epipleuron narrow, usually medially grooved, excavated for reception of middle and hind femoral apices. Prosternal process usually slightly convex, with 2 carinae present (carinae completely absent in *H. dissidens*), carinae of varying lengths (Figs. 8, 10, 12, 77, 405) (Fig. 77, *H. reppensis*, type species). Protibia usually slender, rarely slightly flanged (Figs. 74, 121, 354). Posterior margin of metasternum abruptly descending between coxa and lateral margin. Metendosternite with anterior tendons of fork curved toward middle or not (Figs. 93, 104, 171, 195, 274, 364, 414, 425, 442, 484). Tarsal claw with or without basal tooth. Postcoxal line on first abdominal sternum incomplete, of *Scymnus* (*Scymnus*) type (Figs. 78, 122) (Fig. 78, *H. reppensis*, type species). ♂ apical abdominal sternum weakly modified. Apex of ♀ abdominal sternum 6 rounded. ♀ genitalia with coxal plate basically transverse (Fig. 97), rather than long, narrowly triangular as in *Tenuisvalvae* (Fig. 494).

Remarks. *Hyperaspis* is a Western Hemisphere genus with some Old World representatives. It is particularly prolific in North

America with 103 species and subspecies present (GORDON 1985). For South America we record 68 species of *Hyperaspis*, a number dwarfed by the large brachiacanthine genus *Cyra*.

Asymmetry in male genitalia is expressed by the basal lobe, which is usually apically obliquely truncate or rounded and, in ventral view, the right margin of the basal lobe is sinuate with a lateral projection. However, in *H. matronata*, the asymmetry is reversed; the left margin of the basal lobe is sinuate.

GORDON (1985) divided North American *Hyperaspis* into two Sections based on number of antennal articles, and also recorded a few ancillary characters for each Section that are not useful in the South American fauna. We divide South American *Hyperaspis* into two Sections defined by clypeal and frontal structures. Section I has the clypeus and frons joined at an abrupt angle (primitive character state), and contains five groups characterized by number of antennal articles and male genitalia. Section II has the clypeus and frons smoothly, obliquely joined (derived character state), and contains two groups characterized by male genital characters. These groupings are useful as identification aids, but also correspond with the assumption that 10-articled antenna is a primitive character state and 11-articled antenna a derived character state. However, *H. connectens*, which is clearly a member of Section II, has a 10-articled antenna. This divergence indicates that number of antennal articles is not a useful character for distinguishing genera. Within Section I, ♂ genitalia of the *H. onerata* group are considered primitive and those of the *H. howdeni* group are considered derived. In Section II members of the *H. conclusa* group have genitalia with long, slender, relatively unmodified basal lobes, which we consider a derived character state. Other derived character states of the *conclusa* group are dorsoventrally flattened body, moderately deep to shallow epipleural depressions, and elongate body.

Hyperaspis and *Tenuisvalvae* are distinguishable only in the female sex. Therefore, it is possible that some *Hyperaspis* species known only from males may belong in *Tenuisvalvae*.

Examination of the lectotype of *Cleothera micilla* Mulsant, 1853 (designated by GORDON 1987) revealed that it is a species of *Diomus* Mulsant (Scymninae, Diomini), and a junior synonym of *Diomus pallidipennis* (Mulsant, 1850).

Taxa of the brachiacanthine genus *Cyra* are numerous, and species are often confused with *Hyperaspis* species. DUVERGER (2001) correctly designated *Cyra loricata* Mulsant, 1850 the type species of *Cyra*. Mulsant originally described this species as *Cleothera* (*Cyra*) *loricata*. MULSANT (1850) described the genus *Cleothera* for a single species, *C. buqueti* Mulsant, 1850, which is actually a species of the previously described genus *Hinda* Mulsant, 1850, as recognized by WEISE (1895: 127). Thus, *Cleothera* is a junior synonym of *Hinda*, and *Cyra* becomes the correct generic name for those species described as *Cleothera* (*Cyra*) by MULSANT in 1850 and in subsequent publications.

DUVERGER (2001) described 3 American genera of Hyperaspidini as follows. *Clavatus* is a monotypic Mexican and Central American genus based on *Hyperaspis acanthicola* Chapin, 1966, a species associated with ants, which we consider valid. *Gordoni* is a monotypic North American genus based on *Hyperaspis significans* Casey, 1908, which we here place as a junior synonym of *Hyperaspis* because the only distinguishing character is the pubescent head. *Aliana* is a monotypic genus based on *Hyperaspis connectens* (Thunberg, 1808), that we also consider a junior synonym of *Hyperaspis* because the only distinguishing character is the sparsely pubescent clypeus. Both of the latter genera also have a 10-articled antenna, a character not considered of value at the generic level in *Hyperaspis* because it occurs in obviously dissimilar groups within the genus.

KEY TO SPECIES OF *HYPERASPIS*

- 1. Clypeus and frons joined at abrupt angle (Figs. 7, 8) 2
- Clypeus and frons smoothly, obliquely joined (Figs. 11, 12) 57
- 2(1). Species with pale elytral maculation (usually reddish or yellow spots) on dark background (Figs. 72, 79) 3
- Species with dark elytral maculation (usually brown or black spots) on pale background (Figs. 83, 213) 40
- 3(2). Species without yellow lateral border on elytron 8
- Species with yellow lateral border on elytron 4

- 4(3). Species without pale elytral spot, with yellow lateral border on elytron (Fig. 100). 5. *scutifera* Mulsant
Species with 1 or more discal spots on elytron, with yellow lateral border. 5
- 5(4). Species with 1 pale, discal spot on elytron and yellow lateral border. 7
Species with 2 or more pale, discal spots and yellow lateral border and. 6
- 6(5). Elytron with 2 pale discal spots (Fig. 134)
. 10. *limbigera* Mulsant
Elytron with 6 yellow spots (Fig. 366) 53. *histrionica* (Mulsant)
- 7(5). ♂ pronotum with lateral border of median black spot projected onto yellow lateral margin (Fig. 204); Brazil. . . .
. 21. *siladesma*, n. sp.
♂ pronotum with lateral border of median black spot straight (Fig. 100); Colombia, Curaçao, Venezuela. . . .
. 5. *scutifera* Mulsant
- 8(3). Elytron vittate 19. *brethesi*, n. sp.
Elytron not vittate, with variously shaped spots 9
- 9(8). Elytron with 1 pale, elytral macula 10
Elytron with more than 1 pale, elytral macula 20
- 10(9). Elytron with 1 yellow, humeral spot (Fig. 292) 37. *atra*, n. sp.
Elytron with pale macula not on humerus 11
- 11(10). Elytron with 1 yellow, apical spot (Fig. 273) 12
Elytron with yellow spot or pale macula not apical 15
- 12(11). Length more than 3.0 mm (Fig. 347) . . . 49. *abertha*, n. sp.
Length less than 2.5 mm 13
- 13(12). Prosternal carinae nearly parallel, not reaching basal prosternal margin 33. *mimica*, n.sp.
Prosternal carinae tapered from apex to base, reaching basal prosternal margin. 14

- 14(13). ♂ genitalia with basal lobe short, wide, with lateral angulation (Fig. 264) 31. *apicaspis*, n. sp.
 ♂ genitalia with basal lobe long, tapered from base to apex, without lateral projection (Fig. 270).
 32. *delicata* Almeida & Vitorino
- 15(11). Elytron with 1 yellow, discal spot 16
 Elytron with more than 1 yellow spot or pale macula . . 20
- 16(15). Length less than 2.0 mm; elytral spot irregularly rounded (Fig. 332). 45. *guilloryi* (Mulsant)
 Length more than 2.0 mm; elytral spot irregularly rounded or not 17
- 17(16). Elytron with spot large, narrow apically and widened posteriorly 18
 Elytron with spot small, oval or irregularly rounded . . . 19
- 18(17). Elytron with anterior margin of spot reaching anterior border of elytron, outer margin of spot emarginate around humeral callus (Fig. 286). 36. *chocoi*, n. sp.
 Elytron with anterior margin of spot widely separated from anterior border of elytron, inner margin of spot widely emarginate on disc (Fig. 339). . . . 47. *istmina*, n. sp.
- 19(17). Elytron with spot regularly oval, reddish yellow (Fig. 113); Trinidad 7. *chapini*, n. sp.
 Elytron with spot irregularly rounded, yellow (Fig. 283); Colombia 45. *howdeni*, n. sp.
- 20(9). Elytron with 2 pale spots 21
 Elytron with more than 2 pale spots 28
- 21(20). Prosternal carinae completely absent (Fig. 9); discal spot transversely sinuate (Fig. 221) 25. *dissidens*, n. sp.
 Prosternal carinae present; discal spot not transversely sinuate 22
- 22(21). Elytron with 1 scutellar spot and 1 discal spot (Fig. 297) 38. *recordata* Mulsant

- Elytron with 1 discal and 1 apical spot 23
- 23(22). Elytron with apical spot transverse, yellow; median, black pronotal area strongly emarginated with yellow laterally (Fig. 153). 13. *biguttata* Sicard
- Elytron with apical spot rounded or slightly transverse, or if strongly transverse, then nearly white in color; median black pronotal area not emarginated with yellow laterally. 24
- 24(23). Length more than 2.6 mm; anterior tibia slightly flanged; antenna with 10 articles; Bolivia 1. *latitibia*, n. sp.
- Length less than 2.5 mm; anterior tibia not flanged; antenna with 11 articles; Argentina and Brazil 25
- 25(24). Elytron with transverse, nearly white, apical spot; discal spot small, about the diameter of an eye (Fig. 255) 30. *albopunctata* Crotch
- Elytron with rounded, yellow apical spot; discal spot much larger than an eye diameter 26
- 26(25). Elytron with discal spot large, median; discal and apical spots narrowly separated (Fig. 144) 12. *camargoi*, n. sp.
- Elytron with discal spot small anterior to middle; discal and apical spots widely separated. 27
- 27(26). Elytral surface smooth, polished; elytral punctures distinctly larger than pronotal punctures (Fig. 200). 20. *rosariensis*, n. sp.
- Elytral surface weakly alutaceous, slightly shiny; elytral punctures slightly larger than pronotal punctures (Fig. 138) 11. *bisignata*, n. sp.
- 28(20). Elytron with 3 yellow spots or maculae. 29
- Elytron with more than 3 spots or maculae 35
- 29(28). Pronotum with an oblique, yellow, basomedian spot on each side of middle; apical elytral spot c-shaped (Fig. 342) 48. *satipoensis*, n. sp.
- Pronotum without oblique basal spots; apical elytral spot c-shaped or not 30

- 30(29). Elytron with yellow scutellar spot (Fig. 336) 46. *pseudopavida*, n. sp.
 Elytron without scutellar spot 31
- 31(30). Elytral spots small, the diameter of an eye or smaller (Fig. 119)..... 8. *cracentis*, n. sp.
 Elytral spots larger than an eye diameter 32
- 32(31). Pronotum mostly black; median spots on elytron narrowly connected (Fig. 244)..... 28. *bicrucinata* (Mulsant)
 Pronotum mostly yellow; median spots on elytron usually not connected..... 33
- 33(32). Pronotum yellow with pale brown maculae, or with large, yellow lateral area deeply emarginating median brown spot; antenna with 11 articles..... 34
 Pronotum yellow with large, rectangular, median black area (Fig. 79); antenna with 10 articles .. 2. *donzeli* Mulsant
- 34(33). All elytral spots large, narrowly separated or contiguous (Fig. 176); pronotum always yellow with pale brown maculae; apical spot on elytron large, c-shaped, occupying most of apical declivity; 17. *orthivora*, n. sp.
 All elytral spots small, widely separated, not contiguous; pronotum occasionally yellow with pale brown maculae, usually with large, lateral yellow area deeply emarginating median brown spot (Fig. 167); apical spot on elytron slightly c-shaped or not, occupying less than 1/2 of apical declivity 16. *pseudodonzeli*, n. sp.
- 35(28). Elytron with 4 yellow spots 36
 Elytron with more than 4 yellow spots 38
- 36(35). Elytron without scutellar spot (Fig. 249). 29. *joannae*, n. sp.
 Elytron with scutellar spot 37
- 37(36). Dorsal ground color black; pronotal and elytral punctures coarse; apical yellow spot on elytron transverse (Fig. 156)..... 14. *cleida* Mulsant

- Dorsal ground color dark brown; pronotal and elytral punctures fine; apical yellow spot on elytron c-shaped (Fig. 312). 41. *simlaensis*, n. sp.
- 38(35). Elytron with 6 yellow spots (Fig. 160) . 15. *tayronensis*, n. sp.
 Elytron with 5 yellow spots 39
- 39(38). Length less than 2.0 mm; median lateral spot on elytron regularly oval (Fig. 279); antenna with 11 articles 34. *laterimacula*, n. sp.
 Length more than 2.1 mm; median lateral spot triangular or projecting inward (Fig. 110); antenna with 10 articles. 6. *imitatrix*, n. sp.
- 40(2). Elytron yellow with indistinct, obscure, brownish markings (Fig. 91); antenna with 10 articles . . 4. *helveola*, n. sp.
 Elytron not as described above; antenna with 10 or 11 articles. 41
- 41(40). Elytron with concentric arcs of varying colors 42
 Elytron with distinct spots or maculae 43
- 42(41). Elytral background yellow, punctures pale brown, dark brown curved vitta present medially (Fig. 184) 18. *zonula*, n. sp.
 Elytron with narrow, lateral, yellow band, median, oval reddish yellow area, and broad, irregular sutural vitta (Fig. 352). 50. *circumclusa*, n. sp.
- 43(41). Elytron with 1 black or dark brown spot 44
 Elytron with more than 1 black or dark brown spot . . . 47
- 44(43). Elytron with black spot extended from base at scutellum posteriorly to apical declivity, spot narrowed medially (Fig. 127) 9. *operaria* (Mulsant)
 Elytron with spot not as described above 45
- 45(44). Elytra with butterfly shaped median spot (Fig. 308) 40. *mariposa*, n. sp.
 Elytra with spot not butterfly shaped 46

- 46(45). Elytra with large black spot surrounded by narrow, yellow band (Fig. 227). 26. *uninotata*, n. sp.
 Elytra with spot brown, c-shaped . . . 43. *c-nigrum* Mulsant
- 47(43). Elytron with median, brown, discal spot, spot sometimes united with that on opposite elytron forming single spot, and sometimes with small, obscure, lateral spots; many brown elytral punctures presenting "freckled appearance" (Fig. 189); male pronotum often with 2 large, basomedian yellow spots (Fig. 192).
 19. *brethesi*, n. sp.
 Elytron with varying number of spots; never with "freckled appearance; male pronotum without large, basomedian spots 48
- 48(47). Elytron with 3 dark spots, sutural margin with distinct dark border 49
 Elytron with more than 3 dark spots, sutural margin with or without dark border. 51
- 49(48). Elytron with small, discrete, brown spot anterior to middle (Fig. 213); ground color of elytron mostly reddish yellow 23. *campbelli*, n. sp.
 Elytron with large, black, discal spot contiguous with mate on opposite elytron 50
- 50(49). Elytra with cordate, sutural spot in anterior 1/2, spot narrowed posteriorly, 2 large lateral spots present on each elytron (Fig. 83); antenna with 10 articles
 3. *matronata* Mulsant
 Elytra with round, sutural spot in middle, 2 small lateral spots present on each elytron (Fig. 232); antenna with 11 articles 27. *onerata* (Mulsant)
- 51(48). Elytron with 4 dark spots, sutural margin narrowly or broadly bordered with black or brown 52
 Elytron with 5 dark spots, sutural margin bordered or not with black or brown. 55
- 52(51). Elytron with elongate, black, humeral spot extended from base past humeral callus, 1 small, elongate spot on

- sutural margin anterior to middle, and 2 small, lateral spots on apical declivity (Fig. 319) 42. *lindae*, n. sp.
 Elytron not as described above 53
- 53(52). Elytron with u-shaped spot in anterior 1/2 curved from base around humeral callus and back to base (Fig. 329) 44. *sagittata* Crotch
 Elytron without u-shaped humeral spot 54
- 54(53). Elytron with 3 spots in row from humerus nearly to suture (Fig. 216) 24. *colombiensis*, n. sp.
 Elytron with 2 spots in anterior 1/2, and 2 spots in posterior 1/2 (Fig. 208) 22. *octonotata*, n. sp.
- 55(51). Pronotum black medially with wide, yellow lateral margins (Fig. 357) 51. *aemulata*, n. sp.
 Pronotum yellow with 4 or 5 brown maculae 56
- 56(55). Pronotum with 4 brown maculae; elytron with brown spots separated by narrow, yellow lines (Fig. 304) 39. *eupaleoides* Crotch
 Pronotum with 5 brown maculae; elytron with 4 brown, discrete, widely separated brown spots (Fig. 361) 52. *dispar*, n. sp.
- 57(1). Elytron pale with dark spots or maculae 58
 Elytron dark with pale spots or maculae 59
- 58(57). Elytra with large, obverse, triangular spot on suture, and one small humeral spot (Fig. 373) . . 55. *herrarai*, n. sp.
 Elytron with suture and 3 spots dark brown to black (Fig. 458) 65. *arida*, n. sp.
- 59(57). Elytron vittate 60
 Elytron not vittate 61
- 60(59). Elytron with median yellow vitta narrow, not enlarged basally (Fig. 464) 66. *elegantissima* Brèthes
 Elytron with median yellow vitta broad, enlarged basally (Fig. 449) 64. *conclusa* Weise

- 61(59). Elytron with single reddish yellow spot on lateral margin (Fig. 422) 61. *funesta* (Germain)
 Elytron without spots, or with 1 or more pale spots, if 1 spot, then elytron with yellow lateral border. 62
- 62(61). Elytron with broad, yellow border, without spots (Fig. 368) 54. *ayacucho*, n. sp.
 Elytron with or without yellow border, always with 1 or more spots present 63
- 63(62). Body extremely elongate, flattened; apical margin of basal sternum sinuate 64
 Body not extremely elongate, flattened; apical margin of basal sternum not sinuate 65
- 64(63). Pronotum with basal margin irregularly yellow; elytron with c-shaped apical spot (Fig. 481) 68. *prolata*, n. sp.
 Pronotum with basal margin black; elytron with apical spot triangular (Fig. 472) 67. *longula* Weise
- 65(63). Species not known from Chile 66
 Species occurring in Chile 69
- 66(65). Elytron with single, elongate, reddish yellow spot (Fig. 419); French Guiana 60. *ingrata* Mulsant
 Elytron with more than 1 spot; French Guiana and elsewhere 67
- 67(66). Pronotum mostly black, lateral margin yellow, and posterior margin with outer 1/3 narrowly yellow (Fig. 386); elytral pattern highly variable (Figs. 386-396); widely distributed, commonly collected species 57. *festiva* Mulsant
 Pronotum variable, but posterior margin not narrowly yellow as described above 68
- 68(67). Elytron with 5 yellow spots, discal and lateral spots usually narrowly connected (Fig. 379) 56. *vredenburgi*, n. sp.
 Elytron with reddish yellow discal and apical spots narrowly connected (Fig. 410) 59. *connectens* (Thunberg)

- 69(65). Elytron with yellow lateral border extended across base to scutellum (Fig. 402) 58. *germainii* Crotch
- Elytron with or without yellow lateral border, if border present, then not extended across base of elytron. 70
- 70(69). Elytron with small, yellow, basal spot between humeral callus and scutellum (Fig. 430) 62. *nana* Mader
- Elytron without basal spot, color pattern variable but usually with discal and lateral spots connected (Figs. 437-440). 63. *sphaeridiodes* Mulsant

Section I

Species with clypeus and frons joined at abrupt angle; protibia slender or slightly flanged.

donzeli group

Hyperaspis species having 10-articled antennae; large body size; clypeus and frons joined at abrupt angle; epipleura obliquely descending externally; protibia apically wide, slightly flanged; and male genitalia similar to *onerata* group.

1. *Hyperaspis latitibia* n. sp.

Type material. Holotype ♂: Bolivia, Santa Cruz, 4-6 k SSE Buena Vista, F&F Hotel, 23-26 Oct 2000, Wappes & Morris (USNM).

Description. ♂, length 3.6 mm, width 2.8 mm; body oval, slightly flattened. Dorsal surface with head alutaceous, weakly shiny; pronotum shiny; elytra shiny. Color black except head yellow with black vertex; pronotum yellow with large, rectangular, basomedian spot, spot widely separated from anterior margin, lateral margin of spot deeply emarginated, elytron with 2 large yellow spots, 1 irregularly rounded, discal spot anterior to middle, 1 transversely oval, subapical spot (Figs. 72, 73); antenna, mouthparts, propleuron yellow; legs yellow except basal 2/3 of femora black; abdomen black with lateral 1/4 reddish yellow. Head punctures fine, separated by

less than a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures much larger than on elytron, separated by a diameter medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 as large as on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, finely, sparsely punctured. Clypeal apex emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral depressions moderate. Antenna with 10 articles. Protibia distinctly flanged (Fig. 74). Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed, reaching basal margin (Fig. 77). Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/4 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum truncate. Genitalia with basal lobe 1/2 as long as paramere, apex narrowly rounded, with large, angulate projection on one margin; paramere wide, tapered from base to rounded apex; (Fig. 75); siphon robust, with apical membranous area, basal capsule with inner arm short, wide, outer arm wide, longer than inner arm, apically knobbed, basal border slightly emarginate (Fig. 76).

♀ Not known.

Etymology. The species name is from the Latin *latus*, meaning broad, and *tibia*, referring to the flanged protibia.

Remarks. This species has the same elytral color pattern as several species of *Hyperaspis*, but *H. latitibia* is larger and the protibia is flanged.

2. *Hyperaspis donzeli* (Mulsant, 1850)

Cleothera donzeli Mulsant, 1850: 638.

Hyperaspis donzeli: CROTCH 1874: 222; KORSCHESKY 1931: 187; BLACKWELDER 1945: 447; GORDON 1987: 28.

Type locality. Brazil. MNHP (lectotype here designated).

Description. ♂, length 3.0 mm, width 2.6 mm; body

form round, slightly flattened. Dorsal surface with head feebly shiny, alutaceous; pronotum and elytron shiny. Color black except pronotum yellow with large, black, irregularly rectangular basomedian spot, anterior margin of spot widely separated from anterior pronotal margin; elytron with 3 yellow spots, 1 round spot medially on disc, 1 triangular spot on lateral margin laterad of discal spot, 1 transversely oval, subapical spot (Fig. 79); antenna, mouthparts, propleuron, legs yellow; abdomen black except outer 1/4 and sternum 5-6 reddish yellow. Head punctures fine, distinct, separated by less than to twice a diameter. Pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, separated by a diameter medially, contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, very fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, strongly descending externally, femoral excavations deep. Antenna with 10 articles. Protibia distinctly flanged. Prosternum with intercoxal carinae tapered toward base, basally stemmed, reaching basal margin. Protibia distinctly flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/4 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum slightly rounded. Genitalia with basal lobe 3/4 length of paramere, strongly, obliquely truncate apically, abruptly sinuate on one side; paramere wide, nearly parallel sided, apex rounded (Fig. 80); siphon robust, curved upward, with membranous area, basal capsule with inner arm short, wide, outer arm long, apically knobbed, base sinuate (Figs. 81, 82).

♀ Not known.

Geographical distribution: Brazil, Paraguay.

Specimens examined: 1. Paraguay: Itapua, Sa. Trinidad (USNM).

Remarks. *Hyperaspis donzeli* has the same elytral color pattern as *H. pseudodonzeli* known from Trinidad and northern South America. However, *Hyperaspis donzeli* differs by the 10-articled

antenna, subapical elytral spots evenly, transversely oval, and the flanged protibia.

A lectotype is here designated to stabilize future usage of this name.

3. *Hyperaspis matronata* (Mulsant, 1853)

Cleothera matronata Mulsant, 1853: 71.

Hyperaspis matronata: CROTCH 1874: 226; KORSCHESKY 1931: 192; BLACKWELDER 1945: 447; GORDON 1987: 28.

Cleothera cordifera Weise, 1895: 128. (**n. syn.**)

Hyperaspis cordifera: KORSCHESKY 1931: 186; BLACKWELDER 1945: 446.

Type locality: of *matronata*, Brazil, UMZC (lectotype designated by GORDON 1987); of *cordifera*, Paraguay, ZMHB (lectotype here designated).

Description. ♂, length 2.6 mm, width 2.1 mm; body form oval, flattened. Dorsal surface with head feebly shiny, alutaceous: pronotum feebly shiny, alutaceous: elytron shiny. Color yellow except pronotum with large, black, basomedian spot, anterior margin of spot widely separated from anterior pronotal margin, lateral margin with earlike projections; elytron with 3 black spots, 1 obliquely oval spot connected to black sutural border on disc, spot together with matching spot on opposite elytron forming a cordate median macula, 1 large, black, triangular spot laterally posterior to humerus, 1 large, more or less triangular spot medially on apical declivity (Fig. 83); pro-, meso-, metasterna black; abdomen black except outer 1/4 and sternum 5-6 reddish yellow. Head punctures fine, distinct, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice diameter. Metasternal punctures larger than on elytron, very sparse medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epi-pleuron oblique, feebly grooved internally, weakly descending externally, femoral excavations deep. Antenna with 10 articles. Protibia

distinctly flanged. Antenna with 11 articles (Fig. 84). Prosternum with intercoxal carinae narrowly separated at apex, tapered toward base, basally stemmed, reaching basal margin. Protibia not flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum truncate. Genitalia with basal lobe 3/4 length of paramere, strongly, obliquely truncate apically, abruptly sinuate on one side (asymmetry reversed); paramere wide, tapered to rounded apex in apical 3/4 (Fig. 85); siphon slender, apically sinuate, with membranous area, basal capsule with inner arm wide, outer arm slightly longer than inner, apically knobbed, base sinuate (Figs. 86, 87).

♀ Similar to ♂ except head with vertex and triangular area on frons black; pronotum entirely black except lateral 1/6 yellow. Genitalia with beak of basal unit large, hastate; connecting duct short (Figs. 88-90).

Variation. Length 2.4 to 3.0 mm, width 1.9 to 2.5 mm. Frons of ♀ varies in color from frontal area black to light brown. Size of elytral spots varies slightly.

Geographical distribution: Southeastern South America

Specimens examined: 28. Argentina: Chaco, Charata; Corrientes, Santo Tomé; Department Resistencia, Chaco; Cordoba; Misiones; Salta, Guemes. Bolivia: Tiguipa; "Ost Bolivien." Brazil: Guanabara, Rio de Janeiro; Nova Teutonia. Paraguay: San Bernardino; Amanbay; San Pedro; Cororo-Rio Yapané; Sapucay (CDA) (MBR) (USNM) (ZMHB).

Remarks. *Hyperaspis matronata* has a distinct color pattern by which it can be recognized. ♂ genitalia differ from those of other species because of reversed symmetry in the basal lobe.

Cleothera cordifera in no way differs from *H. matronata*; therefore it is a junior synonym. The lectotype of *C. cordifera* is here designated to stabilize future usage of this name. It is labeled "Paraguay Drake (green paper)/*Hyperaspis matronalis* Muls *cordifera* Ws (Weise's writing in purple ink)/Syntypus, *Cleothera cordifera* Weise, 1895, labelled by MNHB 2004 (red paper)." Two additional specimens in the series labeled "Amer Drake (green paper)," and "Amer.m (green paper)" are considered type material and are designated as paralectotypes.

4. *Hyperaspis helveola* n. sp.

Type material. Holotype ♂: Brazil, S. Paulo (São Paulo), Cantareira, 4.XII.1958, J. Halik, 11308, Brasil, Halik Collection 1966 (USNM). Allotype. Brazil, Minas Gerais, V. Monte Verde, 14.XII.1961, J. Halik, 17761, Brasil, Halik Collection, 1966 (USNM). Paratypes. 4. 1, Brazil, São Paulo, Cantareira, 15.VIII.1963, J. Halik, 22689, Brasil, Halik Collection, 1966 (USNM); 1, Brazil S. Paulo, horto flor. (T G), 30.I.1959, Brasil, Halik Collectin, 1966 (USNM); 1, Brazil, S. Paulo, Est. S. Paulo, 24.12, Saude 1722, J. Melzer Brasilien, det. by F. W. Nunenmacher, *H. dilatata* Cr., Korschefsky Collection 1952 (USNM); 1, Brazil, Cipo Sao Paulo, 29 Nov 1965, V. N. Alin (BM).

Description. ♂, length 2.8 mm, width 2.5 mm; body form round, convex. Dorsal surface with head dull, strongly alutaceous, pronotum less dull than head, shiny, elytra shiny. Color yellow except pronotum with 4 median brown spots, anterior 2 spots triangular, basal 2 spots slightly triangular, narrowly separated anterior to scutellum; elytron with 2 vaguely defined brown macula, 1 short macula near suture anterior to middle, 1 long, comma-shaped macula laterally from humeral angle to apical 1/4 (Fig. 91); antenna, mouthparts, legs, and most of abdomen reddish yellow; pro-, meso-, metasterna and median area of basal abdominal sternum dark brown. Head punctures very fine, hidden in dense alutaceous sculpture. Pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by 1 to 3 times a diameter. Metasternal punctures larger than on elytron, sparse medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc feebly shiny, alutaceous, coarsely, sparsely punctured. Clypeal apex weakly emarginate, clypeus and clypeus and frons abruptly joined. Epipleuron oblique, internally grooved, strongly descending externally, femoral excavations deep. Antenna with 10 articles (Fig. 92). Prosternum with intercoxal carinae convergent toward base, basally stemmed, reaching basal margin. Protibia slightly flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, curved along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum dis-

tinctly emarginate. Genitalia with basal lobe $3/4$ length of paramere, wide, with abruptly angulate projection on one side; paramere short, very wide, narrowed to rounded apex in apical $1/4$ (Fig. 94); siphon robust, apex sinuate, with membranous area, basal capsule with inner arm long, slender, outer arm short, wide (Figs. 95, 96).

♀ Similar to male except vertex and upper $1/2$ of frons dark brown. Genitalia with beak of basal unit short, robust, very wide (Figs. 97-99).

Variation. Length 2.7 to 3.2 mm, width 1.4 to 2.7 mm Elytron with vague brown areas varying from entirely absent to expanded, occupying most of elytron.

Etymology. The specific name is from the Latin *helvus*, meaning yellow, *helveolus* (pale yellow), and refers to the dorsal coloration.

Remarks. This is a large, pale species with elusively vague elytral maculation. No other species of South American *Hyperaspis* has the same combination of dorsal color and body shape.

chapini group

Hyperaspis species having 10-articled antenna; small body size; clypeus and frons abruptly joined or joined at slight angle (*H. scutifera*); epipleura flat, not descending externally; protibia narrow, not flanged; and male genitalia of varying types.

Two species in this group, *H. imitatrix* and *H. chapini*, are closely related, sharing the same type of male genitalia having an extremely long siphon.

5. *Hyperaspis scutifera* (Mulsant, 1850)

Cleothera scutifera Mulsant, 1850: 565.

Hyperaspis scutifera: CROTCH 1874: 216; KORSCHESKY 1931: 195; BLACKWELDER 1945: 448.

Hyperaspis incompleta Crotch, 1874: 225; KORSCHESKY 1931: 225; BLACKWELDER 1945: 445; GORDON 1987: 28. (n. syn.)

Type locality: of *scutifera*, Venezuela, Valencia, DEZ (lectotype here designated); of *incompleta*, Colombia, UMZC (holotype).

Description. ♂, length 2.4 mm, width 1.7 mm; body oval, convex. Dorsal surface with head weakly shiny alutaceous; pronotum and elytra shiny, slightly alutaceous. Color yellow, pronotum black with lateral 1/5 yellow, inner margin of yellow area straight; elytron with irregular, black, sutural spot, spot abruptly widened posterior to scutellum and again posterior to middle, a small poorly defined spot on humeral callus (Figs. 100, 101); antenna, mouthparts, propleuron, epipleuron and legs yellow; abdomen with lateral 1/8 and sterna 5-6 yellowish red. Head punctures distinct, separated by less than to twice a diameter. Pronotal punctures larger than on head, separated a diameter or less; elytral punctures as large as on pronotum, separated by less than a diameter. Metasternal punctures larger than on elytron, sparse medially, dense, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at slight angle. Epipleuron flat, slightly grooved medially, not descending externally, femoral excavations moderate, not deep. Antenna with 10 articles (Fig. 103). Prosternum with intercoxal carinae convergent from apex toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, rounded along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum truncate. Genitalia with basal lobe as long as paramere, with small projection on one margin; paramere slender, tapered from basal 1/4 to rounded apex (Fig. 105); siphon slender, inner arm long, outer arm shorter than inner arm, basal border widely, shallowly emarginate (Figs. 106-107).

♀ Similar to male except head black; anterolateral pronotal angle narrowly yellow. Genitalia with beak of basal unit large, elongate, connecting duct short (Fig. 108).

Variation. Length 2.4 to 2.6 mm, width 1.6 to 1.7 mm. Dorsal color may be black except head yellow; elytron bordered with yellow except sutural margin, yellow border extended from laterad of scutellum around elytron nearly to suture at apex, inner margin of border sinuate, basal portion of lateral yellow border may be re-

duced or absent (Fig. 102), and there is a tendency for the yellow border to separate from an apical yellow spot. The lectotype female has the yellow elytral border uniform, not sinuate, except for a distinct posterior extension on each side of scutellum.

Geographical distribution: Colombia, Venezuela, Curaçao.

Specimens examined: 15. Colombia: Meta, Puerto Gaitàn, Calimagua; Valle Palmeira. Curaçao: Schottgatwee; Zapateer. Venezuela: Aragua, Cagua; Chacas, nr. Caracas; Damacar; Tocayo; Valencia (BM) (DEI) (USNM).

Remarks. The color pattern(s) of this species is not uncommon in South American *Hyperaspis* species, but unique among those with 10-articled antennae. The dorsal color pattern is highly variable (Figs. 100-102), but genital characters are mostly stable. Specimens from Curaçao might not belong to this species. However, the genitalic differences are not definitively distinct, and we consider them, at least provisionally, to be *H. scutifera*.

The ♀ genitalia of type specimens of *H. scutifera* and *H. incompleta* were examined and appear identical. Therefore, we consider them synonyms. A ♀ syntype of *H. scutifera* is here designated to stabilize future usage of this name. It is in the DEI collection, labeled "Venezuela Schaum (handwritten)/Coll. Haag/Syntypus (pink paper)/*scutifera* mls. typ."

6. *Hyperaspis imitatrix* n. sp.

Type material. Holotype ♂: Brazil, Chapada, Acc. No. 2966, Dec. (CMNH).

Paratype: Bolivia, Warscewski (sic !) (ZMHB).

Description. ♂, length 2.3 mm, width 1.7 mm; body oval, convex. Dorsal surface with head weakly shiny, alutaceous: pronotum and elytra shiny, slightly alutaceous. Color black except head yellow; pronotum with large, basomedian black spot, anterior border of spot arcuate; elytron with 5 yellow spots, scutellar spot at base slightly rectangular, small oval spot at middle anterior to apical declivity, elongate humeral spot on lateral margin from base nearly to midpoint of elytron, triangular spot on lateral margin posterior to midpoint, and transversely oval subapical spot (Figs.

109, 110); antenna, mouthparts, propleuron, epipleuron and legs yellow; abdomen brown with lateral 1/8 and sterna 5-6 yellow. Head punctures distinct, separated by a diameter or less. Pronotal punctures slightly larger than on head, separated a diameter or less; elytral punctures as large as pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, sparse medially, dense, nearly contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, coarse, sparse medially, becoming dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, sparsely punctured. Clypeal apex deeply emarginate; clypeus and frons joined at abrupt angle. Epipleuron flat, slightly grooved medially, not descending externally, femoral excavations deep. Antenna with 10 articles. Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, not reaching basal margin, not basally stemmed. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, rounded along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum distinctly emarginate. Genitalia with basal lobe as long as paramere, with large, rounded projection on one margin; paramere slender, tapered from basal 1/4 to rounded apex; trabes apically curled (Fig. 111); siphon slender, extremely long, about 5 times length of phallobase, apex unmodified, basal capsule with inner arm long, outer arm nearly absent (Fig. 112).

♀ Not known.

Variation. Paratype with pronotum entirely yellow except for narrow, black, basomedian border, border widened at each end; elytron with subapical spot narrowly connected to median spot, elytral maculation larger than in holotype.

Etymology. The specific name refers to the similarity in size, shape, and color pattern to some variations of *H. incompleta*.

Remarks. This species and *H. scutifera* are similar in external appearance, but *H. imitatrix* has male genitalia with an extremely long siphon, the longest yet observed in *Hyperaspis*. In addition, the apically curled trabes is shared only with *H. chapini*, which has a single discal spot on each elytron.

7. *Hyperaspis chapini* n. sp.

Type material. Holotype ♂: Trinidad, B.W.I. (British West Indies), 1903, G. E Bryant, G. Bryant Coll. 1919-147 (BM). Allotype ♀: same data as holotype (BM). Paratypes, 2: same data as holotype (BM).

Description. ♂, length 2.1 mm, width 1.7 mm; body oval, convex. Dorsal surface with head slightly alutaceous, shiny; pronotum slightly alutaceous, shiny; elytra shiny. Color black except head yellow; pronotum yellow with large, basomedian black spot extended $3/4$ distance to anterior border, lateral margin of spot emarginated; elytron dark brown with 1 reddish yellow, elongate spot on disc slightly posterior to middle (Fig. 113); antenna, mouthparts, propleuron, legs yellow; epipleuron reddish brown; abdomen brown with lateral $1/8$ to $1/4$ yellow. Head punctures distinct, separated by less than a diameter. Pronotal punctures slightly larger than on head, separated by a diameter or less; elytral punctures as large as pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, dense, nearly contiguous laterally. Punctures on abdominal sterna 1-4 as large as on elytra, dense medially, becoming fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, slightly grooved internally, descending externally, femoral excavations deep. Antenna with 10 articles. Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, rounded along margin, apex recurved $1/2$ distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum distinctly emarginate. Genitalia with basal lobe $3/4$ as long as paramere, deeply notched on one margin just before base; paramere slender, tapered from basal $1/4$ to rounded apex; trabes apically curled (Fig. 114); siphon slender, extremely long, about 5 times length of phallobase, apex unmodified, basal capsule with inner arm long, outer arm nearly absent (Figs. 115, 116).

♀ Similar to male except head black; pronotum black with anterolateral angle and lateral border narrowly reddish yellow. Genita-

lia with beak of basal unit large, oval; connecting duct short (Figs. 117-118).

Variation. Length 2.1 to 2.4 mm, width 1.7 to 1.8 mm. Female pronotal color varies from that described above to having lateral 1/5 bright yellow.

Etymology. This species is named for Edward A. Chapin, whose systematic research on Coccinellidae has survived the test of time extraordinarily well.

Remarks. This species has a dorsal color pattern unique among species having 10-articled antenna. Male genitalia share with *H. imitatrix* an extremely long siphon and apically twisted trapeses, characters unknown among other *Hyperaspis* species.

onerata group

Hyperaspis species having 11-articled antenna; body slightly dorsoventrally flattened or convex; clypeus and frons joined at abrupt angle; protibia usually narrow, sometimes slightly widened apically; male genitalia with basal lobe usually short, bent medially, obliquely rounded or obliquely truncate apically, with a distinct lateral projection of varying size and shape, wide or oval (Figs. 123, 129, 140, etc.). This group contains both convex and dorsoventrally flattened species. The former are placed first on the assumption that a convex body is a more primitive character state than a flattened body.

8. *Hyperaspis cracentis* n. sp.

Type material. Holotype ♂: Brazil, Rio de Jan. (Rio de Janeiro), Acc No. 2966 (CMP). Allotype ♀: same data as holotype (CMP). Paratypes, 3: same data as holotype except 2 paratypes with additional label "Oct." (CMP) (USNM).

Description. ♂, length 2.5 mm, width 1.8 mm; body oval, somewhat elongate, convex. Dorsal surface with head alutaceous, dull; pronotum slightly alutaceous, feebly shiny; elytra shiny. Color black except head yellow; pronotum with lateral 1/5 and apical 1/4 yellow, elytron with 3 small, yellow spots, 1 spot medially on disc irregularly round, 1 spot on medial lateral margin

medially oval, 1 transversely oval subapical spot (Figs. 119, 120); antenna, mouthparts, propleuron, epipleuron and legs yellow except basal 1/4 of pro- and mesofemora dark brown, basal 1/2 of metafemur dark brown; abdomen dark brown with lateral 1/8 and sterna 5-6 brownish yellow. Head punctures fine, nearly invisible in alutaceous sculpture, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures much larger than on elytron, coarse, separated by a diameter medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, coarse, dense medially, becoming fine, dense laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron slightly oblique, internally grooved, weakly descending externally, femoral excavations deep. Antenna with 11 articles. Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed. Protibia narrow, not flanged (Fig. 121). Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/3 distance to basal sternal margin (Fig. 122). Fifth sternum with apex broadly, weakly emarginate; 6th sternum distinctly emarginate. Genitalia with basal lobe 1/2 as long as paramere, wide, apex slightly rounded, with angulate projection on one margin; paramere wide, tapered from apical 1/4 to rounded apex; (Fig. 123); siphon robust, short, apex sinuate with membranous area, basal capsule with inner arm robust, outer arm shorter than inner, apically truncate (Figs. 124, 125).

♀ Similar to ♂ except head black; pronotum black except lateral 1/5 yellow. Genitalia with beak of basal unit short, curved; connecting duct short (Fig. 126).

Variation. Length 2.4 to 2.7 mm, width 1.8 to 2.0 mm.

Etymology. The specific name is from the Latin *cracens*, meaning neat, graceful, referring to the elegant and graceful dorsal appearance.

Remarks. The dorsal color pattern and very coarse ventral punctation distinguish this species.

9. *Hyperaspis operaria* (Mulsant, 1853)

Cleothera operaria Mulsant, 1853: 70.

Hyperaspis operaria: CROTCH 1874: 224; KORSCHESKY 1931: 193; BLACKWELDER 1945: 447; GORDON 1987: 28.

Hyperaspis insignis Crotch, 1874: 226; KORSCHESKY 1931: 190; BLACKWELDER 1945: 447. (**n. syn.**)

Hyperaspis communalis Brèthes, 1925b: 4; KORSCHESKY 1931: 186; BLACKWELDER 1945: 446. (**n. syn.**)

Type locality: of *operaria* (UMZC, lectotype designated by GORDON 1987) and *insignis* (UMZC, holotype), Brazil; of *communalis* (BM, holotype), Río de Janeiro (Brazil).

Description. ♂, length 2.8 mm, width 2.2 mm; body form oval, convex. Dorsal surface with head dull, alutaceous: pronotum alutaceous, slightly shiny: elytron slightly alutaceous, shiny. Color yellow except pronotum with large, black, basomedian spot, anterior margin of spot broadly triangular, base of spot wide, contiguous with black elytral spot; elytron with basal, lateral, and apical borders very narrowly black, with 1 large black spot extended from base on each side of scutellum posteriorly to apical declivity, spot "pinched" medially, apically rounded (Fig. 127); pro-, meso-, metasterna black; outer margin of propleuron yellow; outer margin of epipleuron reddish yellow; abdomen black except outer 1/4 and sternum 5-6 reddish yellow. Head punctures fine, distinct, separated by a diameter or less; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, finely, sparsely punctured. Clypeal apex emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, grooved internally, descending externally, femoral excavations deep. Prosternum with intercoxal carinae narrowly separated at apex, tapered nearly to base, basal stem short, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum not extended to posterior sternal margin, slightly flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum feebly emarginate.

Genitalia with basal lobe $3/4$ length of paramere, sinuate, strongly, obliquely truncate apically, sinuate, with angulate projection on one side; paramere wide, tapered to rounded apex in apical $3/4$ (Fig.129); siphon short, robust, apically sinuate, with membranous area, basal capsule with inner arm wide, short, outer arm wide, longer than inner arm, apically knobbed, base sinuate (Figs.130, 131).

♀ Similar to male except length 3.3 mm, width 2.7 mm; black spot on pronotum and black spot on sutural margin of elytron slightly smaller; elytron with small, faint, brown spot. Genitalia with basal unit expanded, tapered on each end, beak large; connecting duct short (Fig. 132, 133).

Variation. Length 2.8 to 3.3 mm, width 2.2 to 3.3 mm. Size of black elytral spot varies from the typical to wide basally, and long, tapered apically (Fig. 128, *H. insignis*), to narrow basally and short, tapered apically; black outer elytral border absent in *H. insignis*.

Geographical distribution: Brazil

Specimens examined: 3 (the type specimens): 2 Brazil, 1 Brazil, Rio de Janeiro.

Remarks. *Hyperaspis operaria* has a dorsal color pattern that is unique within the South American fauna. The type specimens of *H. operaria* and *H. communalis* have virtually identical color patterns, but the color pattern of *H. insignis* varies somewhat from the typical. After comparing these three type specimens, we conclude that they represent the same species; hence the synonymy listed above. However, examination of male specimens of *H. insignis* may validate that name as a distinct species.

10. *Hyperaspis limbigera* (Mulsant, 1853)

Cleothera limbigera Mulsant, 1853: 77.

Hyperaspis limbigera: CROTCH 1874: 225; KORSCHESKY 1931: 191; GORDON 1987: 28.

Hyperaspis limbifera: BLACKWELDER 1945: 447.

Type locality. Brazil, UMZC (lectotype designated by GORDON 1987).

Description. ♂, length 2.8 mm, width 2.4 mm; body form rounded, convex. Dorsal surface with head dull, alutaceous: pronotum shiny: elytron shiny. Color yellow except pronotum with

2 large, dark brown, narrowly separated triangular spots at base, spots widely separated from apical margin, and small, light brown, oblong spot near lateral margin; elytron with irregular brown border on sutural margin, border slightly expanded in anterior 1/3, and connected to large, irregular brown band on apical declivity, brown band curved laterally and anteriorly, reaching base anterior to humeral callus, brown sutural border feebly connected to lateral band in basal 1/3 (Figs. 134, 135); pro-, meso-, metasterna blackish brown; abdomen yellowish brown except outer 1/4 and sternum 5-6 reddish yellow. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures smaller than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures coarse, much larger than on elytron, separated by a diameter medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, moderately dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, sparsely punctured. Clypeal apex emarginate, clypeus and frons joined at abrupt angle. Antenna with 11 articles (Fig. 136, basal article missing). Epipleuron oblique, grooved internally, descending externally, femoral excavations deep. Prosternum with intercoxal carinae widely separated at apex, convergent nearly to base, basal stem short, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum not extended to posterior sternal margin, slightly flattened along margin, apex recurved 3/8 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe 5/8 length of paramere, sinuate, strongly, obliquely truncate apically, sinuate, with strong, angulate projection on one side; paramere wide, tapered to rounded apex in apical 3/4; siphon long, robust, apically sinuate, with membranous area, basal capsule with inner arm long, slender, apically knobbed, outer arm short, wide, apically knobbed, base sinuate.

♀ Similar to male except triangular pronotal spots widely separated from anterior margin; apex of apical tergum with row of large spines. Genitalia with basal unit elongate; connecting duct short (Fig. 137).

Variation. Length 2.7 to 3.0 mm, width 2.4 to 2.5 mm. Elytron with connection of brown sutural border to lateral brown band feeble, strong, or entirely absent.

Geographical distribution: Brazil

Specimens examined: 4. Brazil: "Brazil" (lectotype); Rio de Janeiro; São Paulo (BM) (UMZC) (USNM).

Remarks. *Hyperaspis limbigera* is distinguished by a combination of dorsal color pattern, elytral punctures distinctly smaller than pronotal punctures, and row of strong spines at apex of the female apical tergum.

11. *Hyperaspis bisignata* n. sp.

Type material. Holotype ♂: (Argentina), Est. Exp. Loreto, Dr. A. Ogloblin, Willard H. Nutting, Jr., collection donated to the Calif. Academy of Sciences May 1990 (CAS). Allotype ♀: Brazil, St Catarina (Santa Catarina), Plaumann, Willard H. Nutting, Jr., collection donated to the Calif. Academy of Sciences May 1990 (CAS). Paratypes, 10. 1, same data as holotype (CAS); 1, same data as allotype (CAS); 1, (Argentina), Est. Exp. Loreto, 193..., Dr. A. Ogloblin, Korschefsky Collection 1952, Willard H. Nutting, Jr., collection donated to the Calif. Academy of Sciences May 1990 (CAS); (Argentina), Est. Exp. Loreto, 193..., Dr. A. Ogloblin (CAS); 1, Brazil, Rio (Grande) do Sul, Lagos. S. Catar (Santa Catarina), 14.I.953, W. Wittmer (CAS); 2, Brazil, Est. S. Paulo (São Paulo), Capitâl; Coll. A. Sacca, 573, Korschefsky Collection 1952 (USNM); 1, (Brazil), São Paulo, Det. by F. W. Nunenmacher, Korschefsky Collection 1952 (USNM); 1, (Brazil), São Paulo, Capital, Col. J.P.F., 21-X-31, R. Korschefsky cum. type comp., *Hyperaspis Deyrollei* Cr., Korschefsky Collection 1952 (USNM); 1, Bolivia, Dept S. Cruz (Santa Cruz), 450 m, umg. Buenavista, Steinback coll., det. by F. W. Nunenmacher, *H. petropolitana* Cr., Korschefsky Collection 1952 (USNM).

Description. ♂, length 3.0 mm, width 2.4 mm; body oval, convex. Dorsal surface with head strongly alutaceous, dull: pronotum alutaceous, feebly shiny; elytra shiny. Color black except head yellow; pronotum with lateral 1/4 and apical 1/4 yellow, elytron with 2 yellow spots, median spot slightly anterior to middle, irregularly rounded, subapical spot transversely oval (Figs. 138, 139); antenna, labial palpi, propleuron yellow; legs reddish yellow except basal 3/8 of femora black; abdomen black with lateral 1/8 reddish yellow. Head punctures fine, nearly invisible in alutaceous sculpture,

separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to a diameter. Metasternal punctures much larger than on elytron, separated by a diameter medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Epipleuron oblique, not internally grooved, weakly descending externally. Clypeal apex deeply emarginate. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles. Prosternum with intercoxal carinae widely separated at apex, convergent from apex toward base, basally stemmed. Protibia not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum nearly truncate. Genitalia with basal lobe 2/3 as long as paramere, wide, apex slightly rounded, with angulate projection on one margin; paramere wide, tapered from middle to rounded apex; (Fig. 140); siphon robust, short, apex curved upward with membranous area, basal capsule with inner arm slender, long, outer arm slender, longer than inner, apically truncate (Fig. 141, 142).

♀ Similar to ♂ except head yellow with vertex and narrow lateral border inside eye black; pronotum black except lateral 1/4 yellow. Genitalia with beak of basal unit short, curved; connecting duct short (Fig. 143).

Variation. Length 2.6 to 3.3 mm, width 2.0 to 2.6 mm.

Etymology. The specific name is from the Latin *bis*, meaning two, and *signata*, meaning mark, referring to the presence of 2 spots on each elytron.

Remarks. This species is very similar to *H. camargoi* but is distinguished from that species by the following: larger in average size; ♀ head mostly yellow; small elytral spots, median elytral spot anterior to middle, widely separated from postapical spot; basal lobe of ♂ genitalia slightly longer and proportionately not as wide; siphon shorter, siphonal basal capsule not sinuate, inner and outer arms not apically knobbed.

12. *Hyperaspis camargoi* n. sp.

Type material. Holotype ♂: Brazil, Campinas, F. C. Camargo, *Hyperaspis silvestris* Ws. ab. det. R. Korschefsky 27, Korschefsky Collection 1952 (USNM). Allotype ♀: Brasil, Campinas, F. C. Camargo, Korschefsky Collection 1952 (USNM). Paratype: Brasil, same data as allotype (USNM).

Description. ♂, length 2.4 mm, width 1.8 mm; body oval, convex. Dorsal surface with head weakly alutaceous, dull: pronotum and elytron shiny. Color black except head yellow; pronotum with lateral 1/4 and apical 1/6 yellow, elytron with 2 large yellow spots, postmedian spot irregularly round, subapical spot transversely oval, narrowly separated from postmedian spot (Figs. 144, 145); antenna, labial palpi, propleuron, tibiae yellow; pro-, meso-, and metasterna brown; abdomen with median area of sterna 1-5 brown, lateral 1/8 and 6th sternum yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by 1 to 2 times a diameter; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures much larger than on elytron, nearly absent medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, coarse, dense medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 146). Prosternum with intercoxal carinae widely separated at apex, convergent from apex toward base, basally stemmed. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum nearly truncate. Genitalia with basal lobe 1/2 as long as paramere, wide, apex obliquely truncate, with angulate projection on one margin; paramere wide, tapered from middle to rounded apex; (Fig. 147); siphon slender, long, apex slightly curved upward, basal capsule sinuate, with inner and outer arms slender, long, outer arm longer than inner, both arms apically knobbed (Figs. 148, 149).

♀ Similar to male except head black. Genitalia with beak of basal unit short, curved; connecting duct short (Figs. 150, 152).

Variation. Length 2.3 to 2.5 mm, width 1.7 to 1.8 mm. Size of elytral spots slightly variable.

Etymology. This species is named for F. C. Camargo, collector of the type series.

R e m a r k s . See remarks under *H. bisignata*.

13. *Hyperaspis biguttata* (Sicard, 1912)

Cleothera biguttata Sicard, 1912: 136.

Hyperaspis biguttata: KORSCHESKY 1931: 185; BLACKWELDER 1945: 446.

Type locality. Brazil, Santos, DEI (lectotype here designated).

D e s c r i p t i o n . ♂, length 2.4 mm, width 2.0 mm; body form rounded, convex. Dorsal surface with head alutaceous, feebly shiny; pronotum feebly alutaceous, shiny; elytron slightly alutaceous, shiny. Color black except head yellow; pronotum yellow with large, median black area, black area not extended to anterior pronotal margin and strongly indented laterally with yellow; elytron with 2 yellow spots, 1 oval spot on disc, 1 transverse, apical spot at posterolateral angle (Fig. 153); mouthparts, propleuron, legs reddish yellow; pro-, meso-, metasterna black; abdomen dark brown except outer 1/4 and sternum 5-6 reddish yellow. Head punctures fine, distinct, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures as large as pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than elytral punctures, sparse medially, contiguous laterally. Punctures on basal abdominal sternum coarse, sparse, punctures on sterna 2-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, nearly impunctate. Clypeal apex weakly emarginate, clypeus and frons joined at right angle. Epipleuron flat, grooved internally, weakly descending externally, femoral depression deep. Prosternum with intercoxal carinae widely separated at apex, tapered toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin,

apex recurved $1/2$ distance to basal sternal margin. Fifth sternum with apex broadly, deeply emarginate; 6th sternum distinctly emarginate. Genitalia with basal lobe $3/4$ length of paramere, obliquely truncate apically, with large, obtuse projection on one side; paramere wide, tapered to rounded apex in apical $1/2$ (Fig. 154); siphon robust, apically sinuate, with membranous area, basal capsule with inner arm long, slender, outer arm shorter than inner arm, basal border emarginate (Fig. 155).

♀ Not known.

Variation. None observed.

Geographical distribution: Brazil.

Specimens examined: 1. Brazil (lectotype) (DEI).

Remarks. This species is similar to *H. bisignata* in dorsal color pattern, but the apical spot is distinctly transverse in *H. biguttata*, rounded in *H. bisignata*, and *H. biguttata* has the median, black pronotal area very strongly indented with yellow laterally. In addition, the siphonal capsule differs between these species.

A ♂ type specimen in the DEI is designated as lectotype to stabilize future usage of this name. Lectotype labels are "Santos, J. Metz/Coll. Kraatz Sicard det./Syntypus (pink paper) /*Hyperaspis biguttata* Sic n. sp. type".

14. *Hyperaspis cleida* Mulsant, 1850

Hyperaspis cleida Mulsant, 1850: 670; CROTCH 1874: 229; KORSCHESKY 1931: 186; BLACKWELDER 1945: 446.

Description. ♂, length 2.6 mm, width 1.8 mm; body form elongate, slightly flattened. Dorsal surface with head alutaceous, feebly shiny; pronotum alutaceous, feebly shiny; elytron slightly alutaceous, shiny. Color black except head yellow; pronotum black except narrow anterior margin and lateral $1/4$ yellow; elytron with 4 yellow spots, 1 obliquely oval spot laterad of scutellum, 1 round spot just anterior to apical declivity near suture, 1 small, triangular spot on lateral margin at apical declivity, 1 transversely oval spot at apex near suture (Figs. 156, 157); mouthparts, propleuron, pro- and mesolegs reddish yellow, metafemur brown; pro-, meso-, metasterna black; abdomen dark brown except outer

1/6 of sterna 1-4 reddish yellow. Head punctures fine, distinct, separated by less than to twice a diameter; pronotal punctures very coarse, separated by a diameter or less; elytral punctures slightly larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than elytral punctures, sparse medially, separated by less than a diameter laterally. Punctures on basal abdominal sternum coarse, sparse, punctures on sterna 2-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, sparsely, coarsely punctured. Clypeal apex strongly emarginate, clypeus and frons joined at right angle. Epipleuron flat, grooved internally, weakly descending externally, femoral depression deep. Prosternum with intercoxal carinae widely separated at apex, tapered toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum weakly emarginate. Genitalia with basal lobe 1/2 length of paramere, obliquely rounded apically, with large, angulate projection on one side; paramere wide, tapered to rounded apex in apical 1/3 (Fig. 158); siphon robust, apically sinuate, with membranous area, basal capsule with inner arm long, robust, outer arm shorter than inner arm, basal border emarginate (Figs. 159).

♀. Not known.

Variation. None observed.

Type locality: Brazil.

Geographical distribution: Brazil.

Specimens examined: 1. Brazil.

Remarks. The species described above is recognized by the presence of 4 yellow, elytral spots, and extremely coarse dorsal and ventral punctation.

Hyperaspis cleida was described by Mulsant from specimen(s) in the Chevrolat collection, which was subsequently obtained by Crotch. A single specimen in that collection is labeled "♂ (green paper)/187 (yellow paper) *cleida* m." There is no indication that this is a type; however, it matches Mulsant's original description extremely well; therefore, we assume it to be an example of *H. cleida*, but do not designate it as a lectotype.

15. *Hyperaspis tayronensis* n. sp.

Type material. Holotype ♂: Colombia, Magd. (Magdalena), Parque Tayrona, 21 mi. E. Sta. Marta, V-17-1973, Howden & Campbell (CNC). Paratypes, 2. 1, Colombia, Magd., 12 mi. W. Sta. Marta, V-18-1973, Campbell & Howden; 1, Colombia, Magd., 25 km. E. Barranquilla, V-16-1973, Campbell & Howden (CNC) (USNM).

Description. ♂, length 2.3 mm, width 1.7 mm; body oval, convex. Dorsal surface with head alutaceous, dull; pronotum and elytra slightly alutaceous, shiny. Color dark brown except head yellow; pronotum yellow with small, round, median brown spot on lateral 1/3, large, basomedian, anchor-shaped brown spot not extended to apical margin; elytron with 7 small, yellow spots, 1 round scutellar spot, 1 very small, oval spot between scutellar spot and humerus, 1 oval spot on humeral angle, 1 irregularly triangular discal spot, 1 elongate spot on lateral margin laterad of discal spot, spot on apical declivity narrowly connected to posterior spot on lateral angle (Figs. 160, 162); pro-, meso-, metasterna dark brown; abdomen brownish yellow with lateral 1/8 and sterna 5-6 yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, absent medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, sparse medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, feebly grooved internally, descending externally, femoral excavations deep. Antenna with 11 articles. Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, rounded along margin, apex recurved 3/8 distance to basal sternal margin. Fifth sternum with apex barely perceptibly emarginate; 6th sternum nearly truncate. Genitalia with basal lobe 2/3 as long as paramere, apex obliquely rounded, with strong angulate projection on one margin; paramere wide, tapered from middle to rounded apex; (Fig. 163); siphon ro-

bust, apex sinuate, with membranous area, basal capsule with inner arm wide, longer than outer arm, outer arm wide, short, apically truncate (Figs. 164, 165).

♀ Not known.

Variation. Length 2.3 to 2.5 mm, width 1.7 to 2.0 mm. Median pronotal spot may be divided medially into narrow, transverse brown vitta with each end bent anteriorly, and irregularly triangular apical spot extended laterally nearly to round lateral spot; yellow elytral spots may be large with scutellar, discal, medial lateral, and spot on apical declivity narrowly connected (Fig. 161).

Etymology. The species is named for Parque Tayrona where the holotype was collected.

Remarks. Seven spots on each elytron and the unusually marked pronotum are characters shared only with *H. histrionica*.

Very few Colombian species were available to early systematists such as Mulsant and Crotch; therefore, a high percentage of species from this region remain undescribed. These Colombian species tend to have very distinctive dorsal color patterns as evidenced by *H. tayronensis*.

16. *Hyperaspis pseudonzei* n. sp.

Type material. Holotype ♂: Venezuela, Aragua, Palo Negro, 455 m, 31-VII-1959, sobre escamas en suda (sic!), E. No. 16, col. A. Notz (USNM). Allotype ♀: Trinidad, St. Augustine, BWI, Feb. 52, Collector F.D. Bennett, *Orthezia insignis* on croton (USNM). Paratypes, 38. 8, same data as allotype (USNM); 1, Colombia, Cali, CIAT, Nov 1977, F. D. Bennett Collector, Pred. on *Orthezia* (USNM); 1, Colombia, Magd (Magdalena), Argelia, 28-IX-'35, Murillo No 107 (USNM); 1, Curaçao, Schottgatwee, July 1-5, 62, J Maldonado C (USNM); 3, British Guiana (Guyana), Georgetown, August 1953, Collector F.J. Simmonds (USNM); 1, Trinidad, *Orthezia*, C.I.E.16482 (BM); 7, Trinidad, St. Augustine (CNC); 2, Trinidad W.I., S/Grande, 16-4-1961, N. Gopaul Coll. (CNC); 4, Trinidad, Tunapuna, 2-4-I-59 (CNC); 6, Trinidad, Tunapuna, 6-I-1959 (CNC); 2, Trinidad, Tunapuna, Aug. 1-3, 1969, H. & A. Howden (USNM); 2, Venezuela, Aragua, El Limon, 450

m, 22-V-69, Predator adulto sobre escama en Croto, E. No. 16, Col. A. Notz (USNM).

Description. ♂, length 2.5 mm, width 2.0 mm; body oval, convex. Dorsal surface with head weakly alutaceous, shiny; pronotum and elytra shiny. Color dark brown except head yellow; pronotum yellow with 4 pale brown, indistinct spots, 1 triangular spot medially on each side of middle, 1 narrow, basomedian spot on each side of middle; elytron with 3 large, yellow spots, 1 irregularly rounded spot on disc near suture, 1 somewhat rectangular spot on lateral margin laterad of discal spot, 1 comma shaped subapical spot; antenna, mouthparts, propleuron, mesopleuron, median 1/2 of epipleuron, legs yellow; abdomen with median area of sterna 1-4 brownish yellow, lateral 1/4 and sterna 5-6 yellow. Head punctures fine, separated by less than a diameter; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures much larger than on elytron, sparse medially, dense, nearly contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, coarse, sparse medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, sparsely, coarsely punctured. Clypeal apex emarginate, clypeus and frons joined at abrupt angle. Epipleuron slightly oblique, not medially grooved, slightly descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 170). Prosternum with intercoxal carinae widely separated at apex, convergent from apex toward middle, not basally stemmed, not reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, rounded along margin, apex recurved 2/3 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum weakly emarginate. Genitalia with basal lobe 3/4 as long as paramere, wide, apex obliquely truncate, with angulate projection on one margin; paramere wide, tapered from apical 1/4 to rounded apex; (Fig. 172); siphon robust, apex sinuate, with membranous area, basal capsule with inner arm short, wide, outer arm wide, slightly shorter than inner arm (Figs. 173, 174).

♀ Similar to male except head reddish brown; pronotum may be immaculate, entirely yellow, or brown except lateral 1/3 yellow. Genitalia with beak of basal unit short; connecting duct short (Fig. 175).

Variation. Length 2.3 to 2.5 mm, width 1.8 to 2.0 mm. Male pronotal color varies from that described above to mostly dark brown with lateral 1/3 yellow (Figs. 167-169); elytral spots vary considerably in size and the subapical spot may not be comma shaped but irregularly rounded.

Etymology. The specific name refers to the resemblance to *H. donzeli*.

Remarks. Most specimens of *H. pseudodonzeli* have the comma-shaped subapical spot on each elytron, but female specimens often have this spot rounded. This species has been identified as *H. donzeli* in many collections, but *H. donzeli* is known only from Brazil, and the subapical spot on each elytron is transverse rather than comma shaped.

17. *Hyperaspis orthivora* n. sp.

Type material. Holotype ♂: Colombia, Valle (Valle del Cauca), Palmira, ICA, 4.iii.1991, J. Castillo, sp. EY-9A-91, ex. *Orthezia* sp., PIE 21639, *Hyperaspis* det. R.G. Booth (BM). Allotype ♀; same data as holotype (BM). Paratypes, 9. 5, same data as holotype (BM); 4, Colombia, Cali, CIAT, Nov 1977, F.D. Bennett Collector, Pred. of *Orthezia* (USNM).

Description. ♂, length 2.4 mm, width 2.0 mm; body oval, convex. Dorsal surface with head strongly, feebly shiny; pronotum slightly alutaceous, shiny; elytron shiny. Color yellow except pronotum with 5 pale brown spots, 2 triangular spots medially in anterior 1/2, 1 triangular, basal spot on each side of middle, 1 baso-median, oval spot anterior to scutellum; elytron pale mottled brown with 3 yellow spots, 1 large, oval spot near sutural margin in anterior portion of disc, 1 oval spot on lateral margin laterad of discal spot, 1 large, comma-shaped spot at apex, all spots feebly connected; pro-, meso-, metasterna dark reddish brown; abdomen with median area of sterna 1-4 dark brown, lateral 1/4 and sterna 5-6 reddish yellow. Head punctures fine, separated by a diameter or less; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures as large as pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, sparse medially, separated by less than a diameter laterally. Punctures on abdominal

sterna 1-4 as large as on elytra, dense medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, sparsely, coarsely punctured. Clypeal apex emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, grooved internally, weakly descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 179). Prosternum with intercoxal carinae widely separated at apex, convergent toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum not quite reaching posterior sternal margin, slightly flattened along margin, apex angled forward 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe 2/3 as long as paramere, apex obliquely truncate, with large, angulate projection on one margin; paramere wide, tapered to rounded apex in apical 1/2 (Fig. 180); siphon slender, apically sinuate, apex with membranous area, basal capsule with inner arm short, slender, sinuate, outer arm long, wide, apically knobbed, basal border sinuate (Fig. 181).

♀ Similar to male except head reddish yellow; median 1/3 of pronotum reddish yellow. Genitalia with beak of basal unit short; connecting duct short (Figs. 182, 183).

Variation. Length 2.4 to 2.7 mm, width 2.3. Dark areas on dorsum and venter from light reddish brown to nearly black. Male with dark pronotal spots from described to dark reddish brown, basal spots joined along margin to form narrow band, anterior spots narrowly connected to the basal band (Figs. 176, 177). Elytral spots feebly connected, or strongly, definitely connected (Fig. 178).

Etymology. This specific name is a combination of the first 4 letters of the scale name *Orthezia*, and the Latin *vorator*, meaning devourer, referring to the scale-eating habits of this species.

R e m a r k s . The predominantly yellow color, contrasted with a brown or black elytral ground color, in combination with 3 yellow spots on each elytron, distinguish this species.

18. *Hyperaspis zonula* n. sp.

Type material. Holotype ♂: Brasil, Lagos, Rio do Sul, S. Cater (Santa Catarina), 14.I.1953, W. Wittmer (CAS). Allotype ♀: Bra-

zil, S.C. (Santa Catarina), Sao Joaquina, Boa Jesus Rd, 28.xii.1972, V.F. Eastop 13,890, Brit. Mus. 1976-97, sweeping (BM). Paratype: Brasil, (illegible word), 4496, Hist. Coll. (Coleoptera) Nr. 4496, Genus? spec. Brasil., Virmond., Zool. Mus. Berlin (ZMHB).

Description. ♂, length 3.0 mm, width 2.4 mm; body oval, convex. Dorsal surface with head strongly alutaceous, dull; pronotum slightly alutaceous, shiny; elytra shiny. Color yellow except head with vertex black; pronotum with narrow, basomedian brown band; elytron with suture narrowly brown, and brown, arcuate vitta extended from base inside humeral callus nearly to sutural margin on apical declivity (Figs. 184, 185); pro-, meso-, metasterna dark reddish brown; abdomen with median area of sterna 1-4 dark brown, lateral 1/4 and sterna 5-6 reddish yellow. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures as large as pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, becoming contiguous laterally. Punctures on abdominal sterna 1-4 as large as on elytra, sparse medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, sparsely punctured. Clypeal apex emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, slightly grooved internally, strongly descending externally, femoral excavations deep. Antenna with 11 articles. Prosternum with intercoxal carinae widely separated at apex, convergent to base, not basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex truncate; 6th sternum barely perceptibly emarginate. Genitalia with basal lobe 5/8 as long as paramere, apex obliquely truncate, with large, angulate projection on one margin; paramere wide, tapered to rounded apex in apical 1/2 (Fig. 186); siphon long, apically sinuate, apex with membranous area, basal capsule with inner arm long, inside margin notched, outer arm short, wide, dark brown, apically knobbed, basal border deeply emarginate (Fig. 187).

♀ Similar to male except pronotum with 1 faint, triangular spot on each side of middle in anterior 1/2. Genitalia with beak of basal unit short, extremely wide, batlike; connecting duct short (Fig. 188).

Variation. Length 3.0 to 3.2 mm, width 2.4 to 2.7 mm. Dark areas on dorsum and venter from light reddish brown to nearly black. ♂ with dark pronotal spots from described to dark reddish brown, basal spots joined along margin to form narrow band, anterior spots narrowly connected basal band. Elytral spots feebly connected or strongly, definitely connected.

Etymology. The specific name is from the Latin *zona*, meaning belt, or girdle, referring to the curved elytral vitta and rounded form.

Remarks. This is a distinctive species with an atypical color pattern. The pale dorsal background with a dark curved vitta on each elytron is similar to that of some species of the cocciduline genus *Zenoria* Mulsant, but not to any known species of South American *Hyperaspis*.

19. *Hyperaspis brethesi* n. sp.

Type material. Holotype ♂: 27622, Argentina, M. Garcia (Isla Martin Garcia), BA Aires (Buenos Aires), Korschefsky Collection 1952 (USNM). Allotype ♀: Argentina, Buenos Aires, Isla Martin Garcia, I-1938, M.J. Viana (USNM). Paratypes, 28. 19, same data as holotype; 2, same data as allotype; 1, Argentina, Buenos Aires, Isla Martin Garcia, 4-1937, M.J. Viana; 1. BS Aires, F. 1936 Col.M. Viana; 3, Argentina, Camargo, Nunenmacher Collection; 1, Argentina, Tantana, Chaco, 37374; 1 (Argentina) Cordoba, Alta (illegible name), III-1959, Daguerre, Argentina 1968, Colln. J. Daguerre (BM) (CAS) (MBR) (USNM).

Other specimens: 6. 1, Argentina, Corrientes, S. Tome; 1, Argentina, Misiones, Posadas, NLH Krauss; 1, Argentina, Salta, Oran; 3, Bolivia, Santa Cruz, 3-4 k N Agua Clara, 12 Oct. 2000, Wappes & Dozier (MBR) (USNM).

Description. ♂, length 2.1 mm, width 1.7 mm; body oval, convex. Dorsal surface with head slightly alutaceous, shiny; pronotum slightly alutaceous, shiny; elytron shiny. Color yellow except pronotum with median 1/3 dark brown with yellow, eyelike spot on each side of middle; elytron yellow, speckled with brown dots instead of entirely dark brown above, elongate brown spot on disc at sutural margin, another elongate brown spot near suture on

apical declivity, humeral callus with small brown spot (Fig. 189); antenna, mouthparts, propleuron, mesopleuron, epipleuron, legs yellow; abdomen with median area of sterna 1-4 dark brown, lateral 1/4 and sterna 5-6 reddish yellow. Head punctures fine, separated by 1 to 2 times a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to 2 times a diameter. Metasternal punctures much larger than on elytron, separated by a diameter medially, becoming dense, contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, coarse, sparse medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, sparsely, coarsely punctured. Clypeal apex emarginate, clypeus and frons joined at abrupt angle. Epipleuron flat grooved internally, slightly descending externally, femoral depression deep. Antenna with 11 articles (Fig. 194). Prosternum with intercoxal carinae narrowly separated at apex, convergent toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, slightly flattened along margin, apex recurved 1/4 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum slightly arcuate. Genitalia with basal lobe 3/4 as long as paramere, apex obliquely rounded, with large, angulate projection on one margin; paramere wide, tapered to rounded apex in apical 1/2 (Fig. 196); siphon slender, apex curved, basal capsule with inner arm robust, apically knobbed, outer arm slightly shorter than inner arm, basal border emarginate (Figs. 197, 198).

♀ Similar to ♂ except head brown; pronotum brown except lateral 1/4 yellow, lacking central eyelike spots. Genitalia with beak of basal unit short; connecting duct short (Fig. 199).

Variation. Length 2.1 to 2.4 mm, width 1.7 to 1.8 mm. Dorsal color of pale phase varies from that described above to having either more or fewer dark brown "speckles"; brown spots on suture may be united with those on opposite elytron, creating 1 or 2 central elytral spots. Dark phase brown except head yellow; pronotum yellow with large, brown, basomedian spot, spot widely separated from anterior pronotal margin, apically emarginate, with 2 oblique, eyelike yellow spots in middle; elytron laterally bordered with yellow, curved vitta from scutellum at base to near sutural margin at apical

declivity, vitta connected to lateral border slightly anterior to apical declivity (Figs. 190-193).

Etymology. The species is named for Juan Brèthes, who contributed much to the classification of South American Coccinellidae.

Remarks. There are two color phases of this species; the paler being predominant among specimens examined is chosen as typical. The remaining specimens are described under "Other specimens." Both color phases of *H. brethesi* are distinctive and superficially very different. However, males of both have male pronota identical in color with the central, eyelike spots and identical genitalia. The pale form bears a slight resemblance to *H. operaria*, but the latter species is distinctly larger, more rounded, and lacks the characteristic brown, elytral "speckles".

Isla Martin Garcia, Buenos Aires, is the locality from which most specimens examined were collected.

20. *Hyperaspis rosariensis* n. sp.

Type material. Holotype ♂: Argentina, Salta, Rosario de Lerma, XI-10/14-1983, Malaise Trap, M. Wasbauer coll. (CDA).

Description. ♂, length 2.6 mm, width 2.0 mm; body oval, convex. Dorsal surface with head alutaceous, weakly shiny; pronotum slightly alutaceous, shiny; elytra shiny. Color black except head yellow; pronotum yellow with large, rectangular, basomedian spot, spot widely separated from anterior margin, lateral margin of spot slightly emarginated, elytron with 2 yellow spots, 1 small, round spot near suture anterior to middle of elytron, 1 small, oval, apical spot at posterolateral angle (Fig. 200), spot at posterolateral angle not shown); antenna, mouthparts, propleuron yellow; pro-, mesolegs reddish yellow except outer tibial margins brown; metafemur brown except apical 1/8 yellow; abdomen brown with lateral 1/8 reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures slightly larger than pronotal punctures, separated by 1 to 3 times a diameter. Metasternal punctures much larger than on elytron, absent medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4

larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron slightly oblique, internally grooved, slightly descending externally, femoral excavations deep. Antenna with 11 articles. Protibia narrow, not flanged. Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, rounded along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum feebly truncate. Genitalia with basal lobe 2/3 as long as paramere, apex narrowly rounded, with rounded projection on one margin; paramere wide, tapered from middle to rounded apex; (Fig. 201); siphon long, with apical membranous area, basal capsule with inner arm wide, shorter than outer arm, apically truncate (Figs. 202, 203).

♀ Not known.

Etymology. The species is named for the type locality.

Remarks. This species is similar to *H. bisignata* and *H. camargoi*, but male genitalia are quite different. In addition, dorsal punctation differs, with *H. bisignata* and *H. camargoi* having dense elytral punctures separated by less than to twice a diameter, distinctly larger than pronotal punctures. *Hyperaspis rosariensis* has elytral punctures separated by 1 to 3 times a diameter and only slightly larger than pronotal punctures.

21. *Hyperaspis siladesma* n. sp.

Type material. Holotype ♂: Brazil, Chapada, Acc. No. 2966, Nov. (CMP).

Description. ♂, length 2.1 mm, width 1.6 mm; body oval, slightly flattened. Dorsal surface with head strongly alutaceous, dull; pronotum shiny; elytra shiny. Color black except head yellow; pronotum yellow with large, somewhat rectangular, basomedian spot, spot widely separated from anterior margin, with lateral earlike projection, elytron with lateral border and discal spot yellow, discal spot anterior to middle, irregularly rounded, lateral border

irregular, widened opposite discal spot and at apex (Fig. 204, 205); antenna, mouthparts, propleuron yellow, pro- and mesolegs yellow; metaleg yellow with femur brown except apical 1/8 yellow; abdomen brown with lateral 1/8 reddish yellow. Head punctures hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by less than to about a diameter; elytral punctures larger than pronotal punctures, separated by less than to about a diameter. Metasternal punctures much larger than on elytron, separated by a diameter medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 smaller than on elytra, sparse medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, finely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron slightly oblique, internally grooved, slightly descending externally, femoral depressions moderately deep. Antenna with 11 articles. Protibia narrow, not flanged. Prosternum with intercoxal carinae widely separated at apex, convergent from apex toward base, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 5/8 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum weakly emarginate. Genitalia with basal lobe 5/8 as long as paramere, apex narrowly rounded, with angulate projection on one margin; paramere wide, tapered from basal 1/4 to rounded apex (Fig. 206); (sipho lost except for basal capsule) basal capsule with inner arm slender, shorter than outer arm, outer arm wide, elongate, apically truncate (Fig. 207).

♀ Not known.

Etymology. The species name is an arbitrary combination of letters.

R e m a r k s . *Hyperaspis siladesma* has an elytral color pattern similar to one of the color forms of *H. scutifera*, but that species occurs in northern Colombia and Venezuela and has 10-articled antennae.

22. *Hyperaspis octonotata* n. sp.

Type material. Holotype ♂: Colombia, Magd. (Magdalena), 12 mi. W. Sta. Marta, IV-28-1973, Campbell & Howden (CNC).

Description. ♂, length 2.9 mm, width 2.5 mm; body form round, slightly flattened. Dorsal surface with head dull, strongly alutaceous, pronotum and elytra shiny. Color yellow except pronotum with 4 median brown spots, anterior 2 spots triangular, basal 2 spots slightly triangular, widely separated anterior to scutellum; elytron with 4 oval, brown spots and sutural margin narrowly brown, 1 spot anterior to disc between suture and humerus, 1 spot on humerus, 1 spot on apical declivity inside sutural margin, 1 spot on apical declivity near lateral margin, sutural margin brown from scutellum to apex (Fig. 208, 209); prosternum with basal border and prosternal process pale reddish brown, pro- and mesosterna dark reddish brown, median 2/3 of abdominal sterna 1-4 pale reddish brown. Head punctures very fine, hidden in dense alutaceous sculpture. Pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, coarse, sparse medially, dense laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc feebly shiny, alutaceous, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles. Prosternum with intercoxal carinae convergent toward base, joined at midpoint, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, slightly flattened along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, deeply emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe nearly as long as paramere, wide, apex obliquely truncate, with rounded projection on one side; paramere short, wide, rounded to apex in apical 1/4 (Fig. 210); siphon robust, apex sinuate, with membranous area, basal capsule with inner arm long, slender, outer arm shorter and slightly wider than inner arm (Figs. 211, 212).

♀ Not known.

Etymology. The specific name is from the Latin *octo*, meaning eight, and *notata*, meaning mark, referring to the 8 brown marks on the elytra.

R e m a r k s . The color pattern described above, with variations, is repeated many times in the Hyperaspinae genera *Hyperaspis* and *Cyra*, but within the *onerata* Group only *H. octonotata* and *H. campbelli* have that pattern.

23. *Hyperaspis campbelli* n. sp.

Type material. Holotype ♂: Colombia, Magd. (Magdalena), 12 mi. W. Sta. Marta, IV-29-1973, Campbell & Howden (CNC).

D e s c r i p t i o n . ♂, length 2.4 mm, width 2.0 mm; body form round, slightly flattened. Dorsal surface with head dull, strongly alutaceous, pronotum and elytra shiny. Color yellow except pronotum with 4 median brown spots, anterior 2 spots triangular, basal 2 spots slightly triangular, widely separated anterior to scutellum; elytron with ground color in apical 2/3 reddish yellow (pink), with 4 brown spots, 1 small, elongate spot on suture anterior to middle, 1 narrow, elongate spot on suture in basal 1/2, 1 large, irregular spot on humerus, 1 large, round spot medially on apical declivity (Fig. 213); pro-, meso-, and metasterna reddish brown; basal 4 abdominal sterna pale reddish brown. Head punctures very fine, hidden in dense alutaceous sculpture. Pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, sparse medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc feebly shiny, alutaceous, finely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles. Prosternum with intercoxal carinae convergent toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, deeply emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe 1/2 length of paramere, apex obliquely rounded apically, with large, angulate

projection on one side; paramere short, wide, rounded to apex in apical 1/2 (Fig. 214); siphon slender, apex sinuate, with membranous area, basal capsule with inner arm long, slender, outer arm shorter, wider than inner, apex knobbed (Fig. 215).

♀ Not known.

Etymology. The species is named for one of the collectors of the type specimen.

Remarks. The color pattern of *H. campbelli* is similar to that of *H. octonotata*, but the oddly "pink" elytral ground color is unusual. In addition, the body form of *H. campbelli* is somewhat flattened and the brown elytral spots are of different shapes and are differently arranged, as illustrated.

24. *Hyperaspis colombiensis* n. sp.

Type material. Holotype ♂: Colombia, Valle (Valle del Cauca), Palmira, Candelaria, alt. 1020 m., 31.I.41, Murillo No 5484 (USNM).

Description. ♂, length 2.4 mm, width 2.0 mm; body oval, slightly flattened. Dorsal surface with head strongly alutaceous, dull; pronotum shiny; elytron shiny. Color yellow except pronotum with 4 brown spots, 2 triangular spots medially in anterior 1/2, 1 triangular, basal spot on each side of middle; elytron reddish yellow (pink) with 4 brown spots and suture narrowly brown except brown area wider on apical declivity, 1 small, elongate, oval spot near suture posterior to scutellum, 1 small, elongate, oval spot between suture and humeral callus near base, 1 large, irregular spot on humeral callus, 1, large, irregularly oval spot medially on apical declivity (Fig. 216); mouthparts reddish yellow; pro-, meso-, metasterna black; abdomen with median 1/3 of sterna 1-2 dark brown, remainder of abdominal sterna yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures as large as pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 as large as on elytra, sparse medially, becoming fine, dense laterally; sterna 5-6

finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, nearly impunctate. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, grooved internally, weakly descending externally, femoral depressions moderately deep. Antenna with 11 articles (Fig. 217). Prosternum with intercoxal carinae widely separated at apex, parallel, short, extended 1/2 distance to base. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe 5/8 as long as paramere, apex obliquely truncate, with small, angulate projection on one margin; paramere wide, tapered to rounded apex in apical 2/3 (Fig. 218); siphon slender, curved down in apical 1/4, apex with membranous area, basal capsule heavily sclerotized, dark brown, with inner arm long, slightly curved, outer arm longer than inner, apically knobbed, basal border emarginate (Figs. 219, 220).

♀ Not known.

Etymology. The species is named for Colombia, where the holotype was collected.

Remarks. This species, known only from the holotype male, is characterized by the "pink" ground color of the elytron, unusual elytral spot arrangement, and short, parallel prosternal carinae. In addition, three elytral spots arranged in a transverse row across the base of each elytron is an unusual pattern in *Hyperaspis*.

25. *Hyperaspis dissidens* n. sp.

Type material. Holotype ♂: (Colombia), Villalobos, Barranca de Naranjo, ex: Café Finca, Coll. DJ Calvert & I. Solis, VI-12-73 (USNM). Paratypes, 2:, same data as holotype (USNM).

Description. ♂, length 2.7 mm, width 2.2 mm; body oval, slightly flattened. Dorsal surface with head strongly alutaceous, dull; pronotum slightly alutaceous, weakly shiny; elytron shiny. Color black except head yellow with vertex narrowly black; pronotum with lateral 1/3 yellow, yellow area with internal margin arcuate, an-

terior margin narrowly yellow; elytron with 2 yellow spots, 1 irregular, transverse spot on disc from near sutural margin to lateral margin, 1 obliquely oval, subapical spot, anterior margin of spot slightly emarginated with black (Figs. 221, 222); antenna, propleuron yellow; mouthparts reddish brown; proleg reddish yellow except basal $1/3$ of femur dark brown, mesoleg reddish yellow except anterior and posterior margins of femur, outer margin of tibia dark brown, metaleg dark brown except apex of femur, inner tibial margin and tarsus reddish yellow; abdomen with median area of sterna 1-5 dark brown, lateral $1/8$ and sternum 6 reddish yellow. Head punctures fine, hidden in alutaceous sculpture, separated by 1 to 2 times a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, becoming nearly contiguous laterally. Punctures on abdominal sterna 1-4 smaller than elytral punctures, sparse medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc, finely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron flat, slightly grooved internally, not descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 223). Prosternum without intercoxal carinae (Fig. 9). Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, rounded along margin, apex recurved $1/2$ distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum slightly emarginate. Genitalia with basal lobe $5/8$ length of paramere, apex obliquely truncate, with small, angulate projection on one margin; paramere wide, tapered to rounded apex in apical $1/2$ (Fig. 224); siphon robust, straight apically, apex with membranous area, basal capsule heavily sclerotized, dark brown, with inner arm long, slender, apically hooked, outer arm as long as inner, wide, basal border sinuate (Figs. 225, 226).

♀ Not known.

Etymology. This specific name is from the Latin *dissidens*, meaning differing, referring to the absence of prosternal carinae.

Remarks. Prosterna without carinae are very unusual in *Hyperaspis* species. This character and the median, transverse elytral spot characterize *H. dissidens*.

26. *Hyperaspis uninotata* n. sp.

Type material. Holotype ♂: Brazil, Guanabara, Rio de Janeiro, X.1963, M. Alvarenga coll. (USNM).

Description. ♂, length 3.0 mm, width 2.4 mm; body rounded, slightly flattened dorsoventrally. Dorsal surface with head alutaceous, dull; pronotum alutaceous, feebly shiny; elytra shiny. Color yellow except pronotum with large, black, nearly rectangular basomedian spot in median 1/2; elytra medially black with broad yellow border, apex of black area emarginated with yellow on each side of suture (Fig. 227); pro-, meso-, metasterna black; abdomen reddish brown with lateral 1/8 and sterna 5-6 yellow. Head punctures fine, nearly invisible in alutaceous sculpture, separated by a diameter or less; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures much larger than on elytron, coarse, separated by a diameter medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming fine, dense laterally, sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron flat, feebly grooved internally, not descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 228). Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex feebly emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe 3/4 as long as paramere, apex obliquely rounded, with angulate projection on one margin; paramere wide, tapered from middle to rounded apex (Fig. 229); siphon slender, apex sinuate, with membranous area, basal capsule with inner arm robust, short, outer arm wide, longer than inner arm (Figs. 230, 231).

♀ Not known.

Etymology. The specific name is from the Latin *unicus*, meaning sole or singular, and *nota*, meaning mark, referring to the single black elytral macula.

R e m a r k s . *Hyperaspis uninotata* has a unique dorsal color pattern because the apical margin of the elytral black area is emarginated with yellow on each side of the suture. Other South American *Hyperaspis* species may have a similar appearance, but the black elytral area is differently shaped and ♂ genitalia are different in each instance.

27. *Hyperaspis onerata* (Mulsant, 1850)

Cleothera onerata Mulsant, 1850: 552.

Hyperaspis onerata: CROTCH 1874: 230; KORSCHESKY 1931: 193; BLACKWELDER 1945: 447; GORDON 1987: 29.

Type locality. Colombia. MNHP (lectotype here designated).

D e s c r i p t i o n . ♂, length 2.3 mm, width 1.8 mm; body form oval, flattened. Dorsal surface with head strongly alutaceous, dull: pronotum feebly alutaceous shiny: elytron shiny. Color yellow except pronotum with 2 triangular, black, anteromedian spots narrowly connected to transverse basomedian spot, basomedian spot narrowly irregular (Fig. 236); elytron with basal margin narrowly black medially, sutural margin narrowly black posterior to scutellum, widely black on apical declivity, lateral margin narrowly black from anterolateral angle nearly to suture at apex, joined to black sutural margin, 1 large, oval, discal spot on sutural margin of each elytron forming a single, large, round spot, 1 small black, oval spot posterior to humeral callus, 1 large, irregularly oval spot near lateral margin in apical 1/3 (Figs. 232, 233); pro-, meso-, metasterna black; abdomen black except outer 1/4 and sternum 5-6 reddish yellow. Head punctures fine, distinct, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, very sparse medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside post-coxal arc shiny, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at right angle. Epipleuron flat, grooved internally, weakly descending externally, femoral de-

pression deep. Antenna with 11 articles (Fig. 238). Prosternum with intercoxal carinae widely separated at apex, tapered toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum truncate. Genitalia with basal lobe 5/8 length of paramere, strongly, obliquely truncate apically, with large, acutely angulate projection on one side; paramere wide, tapered to rounded apex in apical 1/2 (Figs. 239, 240); siphon slender, apically sinuate, with membranous area, basal capsule with inner arm wide, outer arm shorter than inner arm, basal border emarginate (Figs. 241, 242).

♀ Similar to male except head reddish yellow with vertex black. Beak of basal unit short; connecting duct short (Fig. 243).

Variation. Length 2.0 to 2.7 mm, width 1.9 to 2.2 mm. Dorsal dark spots vary from black to brown; median pronotal maculation may have anterior dark area separated from basal dark area (Fig. 237); elytron with tendency for lateral spots to coalesce with each other and the apical elytral margin, size of black elytral spots highly variable (Figs. 234, 235).

Geographical distribution: Northern South America, Caribbean Islands.

Specimens examined: 66. Colombia: Cali; Cauca, Puerto Tejada; Cartagena; Cundinamarca, Fusagasuga; Cundinamarca, Melgar; Huila, Campoalegre; Magdalena, Santa Marta; Tolima, Ibagué; Turbaco; Valle del Cauca, Andalucia; Valle del Cauca, Buga; Valle del Cauca, Palmira. Venezuela: Aragua, El Limón; Caracas Valley; Departamento Federal, Caracas (BM) (CNC) (USNM).

Remarks. *Hyperaspis onerata* is distinguished from other *Hyperaspis* species by the dorsal color pattern. The basal lobe of the ♂ genitalia with a very large, acutely rectangular lateral tooth is a character shared with only a few other species.

A ♀ type specimen in the MNHP is designated the lectotype to stabilize future usage of the name. Lectotype labels are "Type/Coll. Mniszech/*onerata*, *Cleothera*, Muls., Colombie, Type". A female specimen in the MNHP bearing identical labels is designated a paralectotype.

28. *Hyperaspis bicruciata* Mulsant, 1850

Hyperaspis bicruciata Mulsant, 1850: 664; CROTCH 1874: 230; KORSCHESKY 1931: 185; BLACKWELDER 1945: 446; GORDON 1987: 29.

Type locality. "Nouvelle-Grenade" (Colombia, Venezuela). UMZC (lectotype designated by GORDON 1987).

Description. ♂, length 2.4 mm, width 1.9 mm; body, oval, convex. Dorsal surface with head strongly alutaceous, dull; pronotum shiny; elytron shiny. Color black except head yellow; pronotum yellow with basomedian brown spot consisting of narrow, basal, transverse vitta with median, vaselike projection extended $2/3$ distance to anterior pronotal margin; elytron with 3 yellow spots, large, yellow discal spot connected to large, yellow lateral spot, and 1 large, transverse, apical spot (Figs. 244, 245); antenna, mouthparts, propleuron, legs reddish yellow; epipleuron reddish brown. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternum with punctures larger than on elytron, separated by a diameter medially, becoming contiguous laterally. Punctures on abdominal sterna larger than on elytra, dense on sterna 1-4, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctate. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral depressions moderate, not deep. Antenna with 11 articles. Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved $1/2$ distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe $2/3$ as long as paramere, sinuate, apex obliquely rounded, with small, acute projection on one margin; paramere oval, slender, tapered from basal $1/4$ to rounded apex; (Fig. 246); siphon long, robust, apically sinuate with membranous area, basal capsule with inner arm short, wide, outer arm slightly longer than inner arm, apically knobbed, basal border weakly emarginate (Figs. 247-248).

♀ Not known.

Geographical distribution: Northern South America.

Specimens examined: 1 (lectotype).

R e m a r k s . The resemblance of this species to *H. connectens* was commented on by both MULSANT (1850) and CROTCH (1874). *Hyperaspis bicruciata* is distinguished from *H. connectens* and other species by the peculiar, vaselike pronotal spot; elytral color pattern with median spots broadly connected; postcoxal line flattened along basal margin; and long, slender basal lobe of the male genitalia.

The lectotype was the only specimen examined.

joannae group

Species with convex body; frons and clypeus joined at abrupt angle; protibia narrow; epipleural depressions deep; ♂ genitalia with inner arm of siphonal basal capsule very long, outer arm very short or nearly absent (Figs. 259, 265), paramere wide or oval.

The basal siphonal capsule with a long inner arm and short to nonexistent outer arm is diagnostic for this group.

29. *Hyperaspis joannae* n. sp.

Type material. Holotype ♂: Colombia, Leticia, Amazonas, 700', July 8, 1970, H. & A. Howden (USNM).

D e s c r i p t i o n . ♂, length 2.5 mm, width 2.0 mm; body oval, convex. Dorsal surface with head strongly alutaceous, dull; pronotum slightly alutaceous, shiny; elytron shiny. Color black except head yellow; pronotum yellow with large, black, basomedian spot, spot widely separated from anterior pronotal margin; elytron with 4 spots, 1 large, reddish yellow, irregularly oval discal spot, 1 small, triangular spot on anterolateral angle, 1 small, irregularly oval spot on lateral margin medially, 1 transverse, subapical spot (Fig. 249, 250); antenna, mouthparts, propleuron, legs yellow; epipleuron reddish yellow; abdomen with median area of sterna 1-4 dark brown, lateral 1/4 and sterna 5-6 reddish yellow. Head punctures not visible in alutaceous sculpture; pronotal punctures fine, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter.

Metasternal punctures much larger than on elytron, sparse medially, separated by a diameter laterally. Punctures on abdominal sterna 1-4 larger than on elytra, coarse, sparse medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, sparsely, coarsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, grooved internally, strongly descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 251, basal article missing). Prosternum with intercoxal carinae narrowly separated at apex, convergent toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/4 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum slightly arcuate. Genitalia with basal lobe short, 1/2 as long as paramere, wide, apex obliquely truncate, with large, rounded projection on one margin; paramere wide, tapered to rounded apex in apical 1/2 (Fig. 252); siphon slender, apex curved upward, with membranous area, basal capsule, with inner arm long, slender, apically knobbed, outer arm very short, basal margin emarginate (Figs. 253, 254).

♀ Not known.

Etymology. This species is named for JoAnne Gordon, without whose influence and assistance one of us (RDG) would not be co-authoring this revision.

Remarks. Characters distinguishing *H. joannae* are the 4 elytral spots whose size and arrangement are not repeated elsewhere in this group or in the South American *Hyperaspis* fauna.

30. *Hyperaspis albopunctata* Crotch, 1874

Hyperaspis albopunctata Crotch, 1874: 229; KORSCHESKY 1931: 184; BLACKWELDER 1945: 446; GORDON 1987: 29.

Type locality Brazil, UMZC (holotype, GORDON 1987).

Description. ♂, length 2.8 mm, width 2.4 mm; body oval, convex. Dorsal surface with head strongly alutaceous, dull; pronotum slightly alutaceous, shiny; elytron shiny. Color black ex-

cept head yellow; pronotum yellow with large, black, basomedian spot, anterior margin of spot widely separated from anterior pronotal margin, narrowly emarginated with yellow apically, elytron with 2 pale yellow spots, 1 very small discal spot, 1 large spot at apex, apical spot transversely elongate, outer end tapered to acute apex (Figs. 255, 256); antenna, mouthparts, propleuron, legs yellow; epipleuron reddish brown; abdomen with median area of sterna 1-5 brown, lateral 1/8 and sterna 5-6 yellow. Head punctures fine, separated by about a diameter; pronotal punctures larger than on head, separated by a less than to twice a diameter; elytral punctures larger than pronotal punctures, separated less than to twice a diameter. Metasternal punctures much larger than on elytron, sparse medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, coarse, dense medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 257). Prosternum with intercoxal carinae widely separated at apex, convergent from apex toward base, basally stemmed. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum truncate. Genitalia with basal lobe 1/2 as long as paramere, apex obliquely truncate, with rounded projection on one margin; paramere wide, tapered from middle to rounded apex; (Fig. 258); siphon slender, long, apex sinuate, curved upward, basal capsule with inner arm very long, apically knobbed, outer arm nearly absent, basal margin sinuate (Figs. 259, 260).

♀ Similar to ♂ except head reddish brown with black vertex; pronotum with basomedial black spot extended to apical margin. Genitalia with beak of basal unit short, connecting duct short (Fig. 261).

Variation. Length 2.6 to 3.0 mm, width 2.4 to 2.5 mm. Pronotum of ♂ with basomedian spot apically emarginate or not.

Geographical distribution: Brazil.

Specimens examined: 16. Brazil: Minas Gerais, Monte Verde; São Paulo, Campos Jordão; São Paulo, Cantareira; Guarulhos, Sítio Bananal (USNM).

R e m a r k s . The dorsal appearance is rather elegant and distinctive within the genus.

31. *Hyperaspis apicaspis* n. sp.

Type material. Holotype ♂: Brazil, 56127 (illegible label), S. Paulo (São Paulo), Fry Coll. 1905.100., *Hyperaspis subapicalis* Crotch (handwritten), not *subapicalis* acc. to Fry coll. type. det. R.G. Booth 2003 (BM).

D e s c r i p t i o n . ♂, length 2.0 mm, width 1.5 mm; body oval, convex. Dorsal surface with head strongly alutaceous, dull; pronotum alutaceous, dull; elytron shiny. Color black except head yellow; pronotum with lateral 1/4 yellow; elytron with 1 round spot at apex, spot widely separated from sutural margin (Figs. 262, 263); antenna, mouthparts, propleuron, legs reddish yellow; abdomen with median area of sterna 1-4 dark brown, lateral 1/4 and sterna 5-6 reddish yellow. Head punctures fine, separated by 1 to 2 times a diameter; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, sparse medially, separated by less than a diameter laterally. Punctures on abdominal sterna 1-4 smaller than on elytra, sparse medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, sparsely, coarsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron flat, slightly grooved internally, not descending externally, femoral excavations deep. Antenna with 11 articles. Prosternum with intercoxal carinae widely separated at apex, convergent toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum truncate. Genitalia with basal lobe short, 1/2 as long as paramere, apex obliquely rounded, with small, angulate projection on one margin; paramere wide, tapered to rounded apex in apical 1/2 (Fig. 264); siphon slender, s-shaped apically, apex with membranous area, basal capsule with inner arm long, slender,

apically knobbed, outer arm very short, apically knobbed, basal border emarginate (Figs. 265, 266).

♀. Not known.

Etymology. The specific name is a combination of the Latin *apiculus*, meaning apex or apical, and *-aspis*, the ending of *Hyperaspis*.

Remarks. *Hyperaspis apicaspis* has the same dorsal color pattern as 2 other species of this group. See remarks under *H. delicata*.

32. *Hyperaspis delicata* Almeida & Vitorino, 1997

Hyperaspis delicata Almeida & Vitorino, 1997: 213-216.

Type locality. Brazil, Paraná, Piraquara (Universidade Federal do Paraná).

Description. ♂, length 2.0 mm, width 1.4 mm; body elongate, oval, convex. Dorsal surface with head strongly alutaceous, dull: pronotum alutaceous, feebly shiny; elytra slightly alutaceous, shiny. Color black except head yellow; pronotum with lateral 1/4 yellow, median black area laterally emarginated with yellow; elytron with small, yellow, subapical spot near posterolateral angle (Fig. 267, 268); antenna, mouthparts, legs reddish yellow except metafemur yellowish brown; propleuron yellow; epipleuron dark reddish brown; abdomen brown with lateral 3/8 reddish yellow. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures larger than on elytron, sparse medially, separated by a diameter or less laterally. Punctures on abdominal sterna much larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, finely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron flat, feebly grooved internally, not descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 269). Protibia narrow, not flanged. Prosternum with intercoxal carinae widely separated at apex, convergent toward base, basally stemmed, reaching basal margin. Postcoxal line on 1st

abdominal sternum not reaching posterior sternal margin, flattened along margin, apex recurved $3/8$ distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe $2/3$ as long as paramere, narrowed from base to apex, apex slightly, narrowly rounded, without projection on one margin; paramere wide, tapered to rounded apex in apical $1/2$ (Fig. 270); siphon long, slender, apically sinuate, with apical membranous area, basal capsule with inner arm long, narrow, irregularly shaped, outer arm nearly absent, basal border slightly emarginate (Figs. 271, 272).

♀ Similar to ♂ except head black.

Variation. Length 2.56 to 3.20, width 1.86 to 2.44 mm.

Geographical distribution: Southeastern Brazil.

Specimens examined: 12. Brazil: Paraná, Piraquara; Paraná, Colombo; Ribiero Pires; São Paulo, São Paulo (CAS) (DZUP) (USNM).

Remarks. Of the 3 species having black elytra with a single, yellow, subapical spot on each elytron, and male genitalia with inner arm of basal capsule extremely long, only *H. mimica* is distinguishable by an external character. *Hyperaspis apicaspis* and *H. delicata* are separable by differences in the basal lobe of the ♂ genitalia. The lobe is short, wide, and with a lateral angulation in the former species, and long, tapered from base to apex, and without a lateral projection on one side in the latter. *Hyperaspis mimica* also has ♂ genitalia with a distinctive basal lobe, but is externally distinguished by prosternal carinae that are narrowly separated at the apex, nearly parallel toward base, and do not reach basal sternal margin.

33. *Hyperaspis mimica* n. sp.

Type material. Holotype ♂: Country not on labels, 1st label illegible, R. Korschefsky cum typ. comp. (pink label), *Hyperaspis subapicalis* Cr. 1926 det. R. Korschefsky, Korschefsky Collection 1952 (USNM).

Description. ♂, length 2.4 mm, width 1.8 mm; body elongate, oval, convex. Dorsal surface with head strongly alutaceous, dull; pronotum alutaceous, feebly shiny; elytra slightly alutaceous, shiny. Color black except head yellow; pronotum with lateral $1/4$

yellow, median black area laterally emarginated with yellow; elytron with small, yellow, subapical spot near posterolateral angle (Fig. 273); antenna, mouthparts, propleuron, proleg yellow; mesoleg reddish brown except apical 1/4 of femur brown; metaleg, epipleuron brown; abdomen brown with lateral 3/8 reddish brown. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, sparse medially, separated by a diameter or less laterally. Punctures on abdominal sterna slightly larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron flat, feebly grooved internally, slightly descending externally, femoral depressions deep. Antenna with 11 articles. Protibia narrow, not flanged. Prosternum with intercoxal carinae narrowly separated at apex, convergent toward base, extended 3/4 distance to basal sternal margin, not stemmed. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex abruptly angled 7/8 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum distinctly emarginate. Genitalia with basal lobe about as long as paramere, narrowed in apical 1/2 to slightly rounded apex, with slight, angulate projection on one margin; paramere long, slender, tapered to rounded apex in apical 1/2 (Fig. 275); siphon long, slender, apically sinuate, with apical membranous area, basal capsule with inner arm long, slender, regular in shape, outer arm very short, basal border slightly emarginate (Fig. 276, 277).

♀ Not known.

Etymology. The species name is from the Latin *mimus*, meaning imitate, referring to resemblance in color pattern to *H. apicalis* and *H. delicata*.

Remarks. In addition to characters discussed under *H. delicata*, *H. mimica* is distinguished by the larger size; comparatively small, dense, dorsal and ventral punctures; and postcoxal line on the basal abdominal sternum apically extended nearly to basal sternal margin.

Holotype specimen labels do not indicate country of origin, which anyway must be in Central or South America.

34. *Hyperaspis laterimacula* n. sp.

Type material. Holotype ♂: O. Bolivien (eastern Bolivia), Prov. Sara, J. Steinbach S.V. (ZMHB).

Description. ♂, length 1.8 mm, width 1.6 mm; body round, convex. Dorsal surface with head strongly alutaceous, dull; pronotum slightly alutaceous, shiny; elytron shiny. Color brown except head yellow; pronotum yellow with basomedian brown spot, anterior margin broadly yellow, lateral 1/4 yellow, basomedian spot broadly emarginated laterally; elytron with 5 yellow spots, 1 small, triangular spot laterad of scutellum, 1, small, round, median discal spot, and 3 large, oval, spots on lateral margin, 1 at humeral angle, 1 at middle, and 1 subapical (Figs. 278, 279); antenna, mouthparts, legs reddish yellow; propleuron, epipleuron yellow; pro-, meso-, metasterna dark reddish brown; abdomen with median area of sterna 1-4 reddish yellow, lateral 1/4 and sterna 5-6 yellow. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, dense medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, sparsely, coarsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, grooved internally, slightly descending externally, femoral excavations deep. Antenna with 11 articles. Prosternum with intercoxal carinae narrowly separated at apex, convergent toward base, basally stemmed, reaching basal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, slightly flattened along margin, apex recurved 1/4 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum truncate. Genitalia with basal lobe short, 1/2 as long as paramere, apex obliquely rounded, with large, angulate projection on one margin;

paramere wide, tapered to rounded apex in apical 1/4 (Fig. 280); siphon long, slender, curved upward apically, apex with membranous area, basal capsule with inner arm long, slender, outer arm very short, nearly absent, basal border widely emarginate (Fig. 281).

♀ Not known.

Etymology. The specific name is a combination of the Latin *latus*, meaning side, and *macula*, meaning spot, referring to the 3 large, lateral spots on each elytron.

Remarks. *Hyperaspis laterimacula* has a siphonal capsule of the same type as the 3 preceding species, but is otherwise unlike them. It is recognized by a combination of small size, round body form, and 5 yellow spots on each elytron. In its elytral spots, *H. laterimacula* resembles *H. vredenburghi*, but the elytral spots of the latter species are much larger, and male genitalia differ significantly.

howdeni group

Hyperaspis species having 11-articled antennae; body flattened or convex; frons and clypeus joined at abrupt angle; protibia narrow; ♂ genitalia with paramere very slender, slightly widened in basal 1/4, tapered to narrowly rounded apex (Fig. 283).

The slender, tapered paramere is diagnostic for this group.

35. *Hyperaspis howdeni* n. sp.

Type material. Holotype ♂: Colombia, Magd. (Magdalena), Parque Tayrona, 21 mi. E. Sta. Marta, V-13-1973, Howden & Campbell (CNC).

Description. ♂, length 2.1 mm, width 1.3 mm; body oval, convex. Dorsal surface with head strongly alutaceous, dull; pronotum slightly alutaceous, weakly shiny; elytron shiny. Color black except head yellow; pronotum yellow with large, black, rectangular basomedian spot, spot widely separated from anterior pronotal margin; elytron with large, irregularly rounded, discal spot (Fig. 282); antenna, mouthparts, propleuron yellow; legs reddish yellow; abdomen with median area of sterna 1-5 dark brown, lateral 1/4 and sternum 6 reddish yellow. Head punctures fine, hidden

in alutaceous sculpture, separated by a diameter or less; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, sparse medially, becoming nearly contiguous laterally. Punctures on abdominal sterna 1-4 as large as elytral punctures, dense medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, grooved internally, descending externally, femoral depressions deep. Antenna with 11 articles. Prosternum with intercoxal carinae narrowly separated at apex, convergent basally, stemmed, reaching basal pronotal margin. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, slightly flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum slightly emarginate. Genitalia with basal lobe as long as paramere, apex obliquely truncate, with distinct, angulate projection on one margin; paramere very slender, slightly widened in basal 1/4, tapered to narrowly rounded apex (Fig. 283); siphon robust, straight apically, apex with membranous area, basal capsule with inner and outer arms short, wide (Figs. 284, 285).

♀ Not known.

Etymology. The species is named for Henry Howden, one of the type collectors, and esteemed entomological colleague.

Remarks. *Hyperaspis* species with a single, discal, elytral spot are uncommon; in addition, *H. howdeni* is distinguished by the large, irregular shape of the discal spot and particularly by the very slender paramere of the male genitalia characteristic of this group.

36. *Hyperaspis chocoensis* n. sp.

Type material. Holotype ♂: Colombia, Chocó, Istmina, 21.VIII.'40, LM Murillo No. 5342 (USNM).

Description. ♂, length 2.3 mm, width 1.8 mm; body oval, slightly flattened, widest posterior to middle. Dorsal surface

with head weakly alutaceous, shiny: pronotum and elytron shiny. Color black except head yellow; pronotum yellow with large, baso-median spot not extended to anterior margin, elytron with 1 large, long, yellow spot medially from near base to apical declivity, outer border of spot emarginate around humeral callus (Fig. 286); antenna, mouthparts, propleuron yellow; legs yellow except basal 1/4 of pro- and mesofemura yellowish brown, basal 2/3 of metafemur brown; abdomen with median area of sterna 1-5 reddish brown, lateral 1/8 and 6th sternum yellow. Head punctures fine, separated by less than a diameter; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures much larger than on elytron, sparse medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, coarse, sparse medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, nearly impunctate. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epi-pleuron oblique, medially grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 287). Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed. Protibia narrow, not flanged. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe 3/4 as long as paramere, wide, apex truncate, with angulate projection on one margin; paramere wide, tapered from middle to rounded apex; (Figs. 288, 289); siphon slender, apex sinuate, with membranous area, basal capsule, with inner arm narrow, outer arm wide, as long as inner arm (Figs. 290, 291).

♀ Not known.

Etymology. This species is named for the Department of Chocó, where the type series was collected.

Remarks. The large, elongate discal spot on each elytron is an excellent recognition character. The holotype was collected at the same place on the same date as the female holotype of *Hyperaspis istmina*, a species nearly identical in size and dorsal color pattern.

37. *Hyperaspis atra* n. sp.

Type material. Holotype ♂: Brazil, Rio de Janeiro, Murundu Campos, VIII, 1978, M. Alvarenga (CMP).

Description. ♂, length 1.8 mm, width 1.5 mm; body oval, convex. Dorsal surface with head alutaceous, weakly shiny; pronotum shiny; elytra shiny. Color black except head yellow; pronotum with apical 1/5 and lateral 1/6 yellow, elytron with 1 small, elongate yellow spot on anterolateral angle outside of humeral callus (Figs. 292, 293); antenna, mouthparts, propleuron yellow; epipleuron brownish yellow; pro-, mesolegs reddish yellow, basal 1/2 of femora brown; metafemur brown except apical 1/8 yellow; abdomen brown with lateral 1/4 reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by less than a diameter; elytral punctures larger than pronotal punctures, separated by less than to a diameter. Metasternal punctures slightly larger than on elytron, separated by a diameter medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron slightly oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles. Protibia narrow, not flanged. Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, rounded along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum broadly, distinctly truncate. Genitalia with basal lobe slightly shorter than paramere, apex acute, with distinct, angulate projection on one margin; paramere wide in basal 1/2, slender, tapered to abruptly rounded apex in apical 1/2 (Fig. 294); siphon long, with apical membranous area, basal capsule with inner arm slender, outer arm slender, slightly shorter than inner arm, apically knobbed, basal border deeply emarginate (Figs. 295, 296).

♀ Not known.

Etymology. The species name is the Latin word *atra*, meaning black, referring to the mostly black dorsum.

Remarks. The black elytron with a single, small, yellow, humeral spot will distinguish *H. atra*.

38. *Hyperaspis recordata* Mulsant, 1850

Hyperaspis recordata Mulsant, 1850: 679.

Hyperaspis recordata: CROTCH 1874: 228 (as synonym of *Cleothera pavidata* Mulsant, 1850).

Hyperaspis pavidata ab. *recordata*: KORSCHESKY 1931: 193; BLACKWELDER 1945: 448.

Type locality. Brazil, UMZC (lectotype designated by GORDON 1987).

Description. ♀, length 2.6 mm, width 2.0 mm; body oval, convex. Dorsal surface with head slightly alutaceous, shiny; pronotum shiny; elytra shiny. Color black except pronotum with lateral margin broadly and anterior margin narrowly yellow; elytron with 2 yellow spots, 1 small, round spot with basal margin truncated near scutellum, 1 small, transversely oval, subapical spot at posterolateral angle of elytron (Figs. 297, 298); antenna, narrow outer margin of propleuron yellow; mouthparts dark brown; legs reddish yellow except basal 2/3 of femur dark brown; abdominal sterna 1-5 dark brown with lateral 1/4 and sternum 6 reddish yellow. Head punctures fine, separated by a diameter or less; pronotal punctures larger than on head, separated by less than a diameter; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, separated by a diameter or less medially, becoming dense, contiguous laterally. Punctures on abdominal sterna larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epipleuron slightly oblique, grooved internally, slightly descending externally, femoral depressions deep. Antenna with 11 articles. Protibia not flanged. Prosternum with intercoxal carinae widely separated at apex, convergent toward base, stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, slightly flattened along margin, apex recurved

3/8 distance to basal sternal margin. Fifth sternum with apex feebly emarginate. Genitalia with beak of basal unit longer than unit, very wide, curved in apical 1/2; connecting duct short (Figs. 302, 302).

♂: Similar to ♀ except apices of abdominal sterna 5 and 6 distinctly emarginate. ♂ genitalia with basal lobe slightly shorter than paramere, wide, apex broadly rounded, with large, distinct, angulate projection on one margin; paramere wide in basal 1/2, slender, tapered to abruptly rounded apex in apical 1/2 (Fig. 299); siphon long, with apical membranous area, basal capsule with inner arm slender, outer arm slender, slightly shorter than inner arm, apically knobbed, basal border moderately emarginate (Figs. 300, 301).

Variation. Length 2.4 to 2.6 mm, width 1.9 to 2.0 mm.

Geographical distribution: Brazil.

Specimens examined: 2. Brazil: Pernambuco (lectotype); Rio de Janeiro (CMP).

Remarks. There are several black species with two pale spots on each elytron, but this is the only one with one of the spots located next to the scutellum.

CROTCH (1874) considered *H. recordata* a synonym of the Mexican *H. pavidula* Mulsant, and his treatment was followed by both KORSCHESKY (1931) and BLACKWELDER (1945). Examination of many hyperaspidae species indicates very little overlap between Mexican and South American species; therefore, we consider *H. recordata* a valid species, probably restricted to northeastern South America.

Species not assigned to a group

Hyperaspis species with 11-articled antennae, and male genitalia differing from any established group and from each other. Hence, they are placed in a "group" of their own.

39. *Hyperaspis eupaleoides* Crotch, 1874

Hyperaspis eupaleoides Crotch, 1874: 224; KORSCHESKY 1931: 188; BLACKWELDER 1945: 447; GORDON 1987: 28.

Hyperaspis graphica Weise, 1902: 174; KORSCHESKY 1931: 190; BLACKWELDER 1945: 447. (**n. syn.**)

Type locality: of *eupaleoides*, Brazil, Minas Gerais (UMZC, lectotype designated by GORDON 1987); of *graphica*, Brazil (ZMHB).

Description. ♂, length 3.3 mm, width 2.7 mm; body form oval, convex. Dorsal surface with head strongly alutaceous, dull: pronotum shiny: elytron shiny. Color yellow except pronotum with 4 triangular brown spots, 2 spots in anterior 1/2 narrowly connected medially, 2 basal spots on each side of middle; elytron with narrow, brown sutural margin and 4 brown spots, 1 elongate, apically tapered spot in basal 1/2 near suture from near base to middle, 1 crescent shaped spot laterally from base across humeral callus nearly to middle, narrowly connected to irregularly shaped spot in apical 1/2, 1 small, free spot near lateral margin in apical 1/2, and 1 very small, subapical spot near sutural margin (Fig. 304); pro-, meso-, metasterna yellowish brown; abdomen yellowish brown except outer 1/4 and sterna 5-6 yellow. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, separated by a diameter medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex shallowly emarginate, clypeus and frons abruptly joined. Epipleuron oblique, grooved internally, strongly descending externally, femoral depression deep. Protibia not flanged. Prosternum with intercoxal carinae widely separated at apex, parallel to basal 1/4, then convergent, not basally stemmed, reaching basal margin. Protibia widened apically. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 3/8 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum emarginate. Genitalia with basal lobe 3/4 length of paramere, apex narrowly, obliquely rounded, with large, weakly angulate projection on one side; paramere wide, tapered to rounded apex in apical 1/2 (Fig. 305); siphon slender, curved upward at apex, with membranous area, basal capsule with inner arm long, narrow, outer arm wide, shorter than inner arm, basal border emarginate (Figs. 306, 307).

♀. Not known.

Variation. Length 3.0 to 3.3 mm, width 2.6 to 2.7 mm.

Geographical distribution: Brazil.

Specimens examined: 4. Brazil: "Brasil"; Minas Gerais; Rio de Janeiro (BM) (ZMHB).

R e m a r k s . *Hyperaspis eupaleoides* has a dorsal color pattern unlike that of any known *Hyperaspis* species, but similar to certain species of *Cyra*, *Eupalea* Mulsant, and *Psyllobora* Chevrolat.

The holotype of *H. graphica* is identical to the lectotype of *H. eupaleoides*; therefore, these are considered synonyms with *H. graphica* the junior. The holotype of the latter is labeled "Brazil (green paper)/*graphica* m/Syntypus *Hyperaspis graphica* Weise 1902, labelled by MNHUB 2004 (red paper)".

40. *Hyperaspis mariposa* n. sp.

Type material. Ecuador (illegible name) (ZMHB).

D e s c r i p t i o n . ♂, length 3.0 mm, width 2.5 mm; body form rounded, convex. Dorsal surface with head alutaceous, feebly shiny; pronotum shiny; elytron shiny. Color yellow except pronotum with dark brown, transverse, basomedian vitta with 2 slender, dark brown projections, 1 on each side of middle, extended anteriorly 1/2 distance to apical margin; elytron with irregular discal spot which, taken in conjunction with spot on opposite elytron, forms butterfly outline (Fig. 308); pro-, meso-, metasterna brownish black; abdomen reddish brown except outer 1/4 and sterna 4-6 yellow. Head punctures fine, separated by a diameter or less; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, separated by a diameter medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 as large as on elytron, sparse medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epi-pleuron slightly oblique, weakly grooved internally, weakly descending externally, femoral depressions deep. Prosternum with intercox-

al carinae narrowly separated at apex, convergent toward prosternal base, basally stemmed, reaching basal margin. Protibia not flanged. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe about as long as paramere, very slightly asymmetrical, slender, apex not oblique, rounded, with indistinct angulate projection on one side; paramere slender, tapered to rounded apex in apical 1/2 (Fig. 309); siphon short, robust, straight apically, apex with membranous area, basal capsule with inner arm short, wide, irregular in outline, outer arm narrower and shorter than inner arm (Figs. 310, 311).

♀ Not known.

Specimens examined. 1 (holotype).

Etymology. The specific name means butterfly in Spanish, referring to the butterfly-shaped elytral macula.

R e m a r k s . The large size, mostly yellow dorsum, and accurate depiction of a butterfly on the elytra distinguish this species.

41. *Hyperaspis simlaensis* n. sp.

Type material. Holotype ♂: Trinidad, Pt. of Spain (Port of Spain), from H. Caracicolo, *Hyperaspis* sp. (USNM). Allotype ♀: Trinidad, Montserrat, July 4.05, Aug. Busck Collector (USNM). Paratypes, 2. Trinidad, 1, same data as allotype except date June, 30.5 (USNM); 1, Trinidad, 250 m, Simla nr. Arima, 25.XI-2 XII.1977, W.R.M.Mason (CNC).

Other specimen: 1. Venezuela, Tiara, m 1200 (Edo. Aragua), 21 V 1967, Bordón leg. (CCM).

D e s c r i p t i o n . ♂, length 2.0 mm, width 1.6 mm; body oval, convex. Dorsal surface with head alutaceous, weakly shiny; pronotum shiny; elytra shiny. Color dark brown except head yellow; pronotum with narrow anterior margin and lateral 1/4 yellow, median brown area triangularly emarginated apically; elytron with 4 yellow spots, 1 triangular scutellar spot at base, 1 triangular discal spot near suture, 1 transversely oval spot on lateral margin laterad of scutellar spot, 1 comma shaped, subapical spot on apical decliv-

ity (Figs. 312, 313); antenna, mouthparts, propleuron, legs yellow; epipleuron yellowish red; prosternum mostly reddish yellow. Head punctures fine, separated by a diameter or less; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures slightly larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, sparse medially, dense, nearly contiguous laterally. Punctures on abdominal sterna larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epipleuron slightly oblique, grooved internally, slightly descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 314). Protibia flanged. Prosternum with intercoxal carinae narrowly separated at apex, convergent nearly to base, basal stem short, reaching basal margin. Abdominal sterna 2-5 with dense fluting in median 1/3. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum truncate. Genitalia with basal lobe about as long as paramere, apex narrowly rounded on one side, with small, angulate projection on one margin; paramere oval, tapered from basal 1/2 to rounded apex (Fig. 315); siphon slender, apically straight, with apical membranous area, basal capsule with inner arm long, slender, outer arm slender, as long as inner arm, apically knobbed, basal border broadly emarginate (Figs. 316, 317).

♀ Similar to ♂ except head with vertex reddish brown, frons and clypeus reddish yellow; apical pronotal margin entirely dark brown, lateral 1/5 yellow. Genitalia with beak of basal unit long; connecting duct short (Fig. 318).

Variation. Length 2.0 to 2.3, width 1.6 to 1.8. Elytron on one paratype with trace of small, reddish yellow spot at anterolateral angle.

Etymology. The species is named for a paratype locality.

Remarks. This is a handsome, highly polished, convex species distinguished by the presence of 4 yellow elytral spots on a reddish brown background, and the unique fluting on abdominal sterna 2-5. The comma-shaped apical spot on each elytron is formed by 2

joined spots, and specimens might be found with these spots distinctly separated. Also, the suggestion of a subhumeral spot on the anterolateral angle might be counted as a spot when distinct. If so, each elytron would have 5 spots and the species would not key out correctly.

42. *Hyperaspis lindae* n. sp.

Type material. Holotype ♂: Colombia, Cld (Caldas), Villamaria, alt. 2000 m, 12.II.41, Murillo No 5465 (USNM).

Description. ♂, length 2.6 mm, width 2.0 mm; body oval, convex. Dorsal surface with head alutaceous, weakly shiny; pronotum shiny; elytron shiny. Color yellow except pronotum with a large, black, median vitta on each side of middle, vitta narrowly separated, not reaching apical margin; elytron red with basal and apical margins narrowly black, 1 short, wide, black vitta extended from base past humeral callus, 1 small, round, black spot medially just anterior to apical declivity, 1 small, oval, black spot on sutural margin in basal 1/2 (Figs. 319, 320); venter of head, most of propleuron, pro-, meso-, metasterna black; abdomen with median area of sterna 1-5 black, lateral 1/8 and sternum 6 reddish brown. Head punctures fine, separated by less than to twice diameter; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures much larger than on pronotum, separated by about a diameter medially, less than a diameter laterally. Punctures on abdominal sterna 1-4 as large as pronotal punctures, sparse medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, sparsely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 321). Protibia not flanged. Prosternum with intercoxal carinae widely separated at apex, convergent near base, basal stem short, reaching basal pronotal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, slightly flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum slightly emarginate.

Genitalia with basal lobe $7/8$ as long as paramere, apical $1/3$ slender, apex rounded, with large, angulate projection one margin; paramere wide, tapered to rounded apex in apical $1/2$ (Fig. 322); siphon robust, long, with large membranous area in apical $1/5$, basal capsule heavily sclerotized, dark brown, inner arm slender, long, outer arm wide, as long as inner arm, apically knobbed (Figs. 323, 324).

♀ Not known.

Etymology. The species is named for Linda Lawrence, illustrator for the Systematic Entomology Laboratory, USDA, Washington, DC, who has provided excellent illustrations of lady beetles for many publications.

Remarks. Elytral color is striking in this species, with black maculation on a red surface. In addition, the prosternal carinae are somewhat unusual because they do not converge until near the basal prosternal margin.

Species known only from females

Here we place those *Hyperaspis* species having 11-articled antennae and known only from the ♀ sex.

In many instances it is nearly impossible to correctly associate *Hyperaspis* ♂♂ and ♀♀ unless they are present in series or in large enough numbers so the connection can be detected.

43. *Hyperaspis c-nigrum* Mulsant, 1850

Hyperaspis c-nigrum Mulsant, 1850: 649; CROTCH 1874: 224; KORSCHESKY 1931: 186; BLACKWELDER 1945: 446; GORDON 1987: 28.

Type locality. Brazil, MNHP (lectotype here designated).

Description. ♀, length 3.4 mm, width 2.7 mm; body form oval, convex. Dorsal surface with head strongly alutaceous, dull; pronotum alutaceous, shiny; elytron shiny. Color yellow except pronotum with 4 triangular, brown spots, 2 spots in anterior $1/2$ narrowly connected to 2 basal spots on each side of middle; elytron with large, brown spot separated from all margins, spot with median yellow area narrowly connected to basal yellow border (Fig.

325, 326); pro-, meso-, metasterna reddish brown; abdomen yellowish brown except outer 1/4 and sterna 5-6 yellow. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures smaller than on elytron medially, sparse, becoming coarse, contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex shallowly emarginate, clypeus and frons abruptly joined. Epipleuron oblique, grooved internally, strongly descending externally, femoral depression deep. Prosternum with intercoxal carinae widely separated at apex, convergent nearly to base, basal stem short, reaching basal margin. Protibia not flanged. Postcoxal line on 1st abdominal sternum not extended to posterior sternal margin, rounded along margin, apex recurved 3/8 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum arcuate. Genitalia with beak of basal unit composed of 2 large segments with earlike, anterolateral projections, connecting duct very short (Figs. 327, 328)

♂. Not examined.

Geographical distribution: Brazil.

Specimens examined: 3. Brazil: "Brazil"; Minas Gerais (MNHP) (UMZC).

R e m a r k s . *Hyperaspis c-nigrum* is a large, distinctly patterned species known from 3 specimens, including the lectotype. Similar in size and coloration only to *H. eupaleoides*, *H. c-nigrum* is distinguished by the dorsal color pattern, as is the former species.

The ♀ lectotype here designated to stabilize future usage of this name is labeled "Muséum Paris, Bresil, Minas-Geraes a Goyaz, de Castelnau 19 - 47/168/ *Hyperaspis C-nigrum* Muls., auct. det.". Another specimen is designated as paralectotype and is labeled "Muséum Paris, des Mines."

44. *Hyperaspis sagittata* Crotch, 1874

Hyperaspis sagittata Crotch, 1874: 225; KORSCHESKY 1931: 195; BLACKWELDER 1945: 448; GORDON 1987: 28.

Type locality. Bogota, Colombia, UMZC (holotype, GORDON 1987).

Description. ♀, length 2.6 mm, width 2.2 mm; body form rounded, convex. Dorsal surface with head alutaceous, dull: pronotum weakly alutaceous, slightly shiny: elytron shiny. Color yellow except pronotum with 4 triangular, brown spots, 2 anterior spots in anterior 1/2 weakly connected to 2 basal spots on each side of middle; elytron with all margins narrowly dark brown, with 4 brown spots, 1 u-shaped spot in anterior 1/2 curved from base around humeral callus and back to base, 1 irregular spot on suture posterior to middle, angled postero laterally onto apical declivity and extended onto apical 1/4, 1 spot nearly lateral margin medially, 1 small, spot on suture at apex (Figs. 329, 330); pro-, meso-, metasterna reddish brown; abdomen yellowish brown except outer 1/4 yellow. Head punctures fine, distinct, separated by a diameter or less; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures smaller than on elytron medially, sparse, becoming coarse, contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons abruptly joined. Epipleuron oblique, grooved internally, descending externally, femoral depression deep. Prosternum with intercoxal carinae widely separated at apex, convergent nearly to base, basal stem short, reaching basal margin. Protibia not flanged. Postcoxal line on 1st abdominal sternum not extended to posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum arcuate. Genitalia with basal unit large, wide medially, tapered at each end, beak short, wide, connecting duct short (Fig. 331)

♂ Not known.

Geographical distribution: Colombia.

Specimens examined. 1 (holotype).

Remarks. *Hyperaspis sagittata* is a distinctly patterned species slightly resembling *H. colombiensis* and *H. campbelli*. It is known only from the ♀ holotype.

45. *Hyperaspis guilloryi* (Mulsant, 1850)

Cleothera guilloryi Mulsant, 1850: 1040.

Hyperaspis guilloryi: CROTCH 1874: 229; KORSCHESKY 1931: 190; BLACKWELDER 1945: 447; GORDON 1987: 29.

Type locality. Colombia, UMZC (lectotype designated by GORDON 1987).

Description. ♀, length 1.6 mm, width 1.3 mm; body form oval, rounded, convex. Dorsal surface with head slightly alutaceous, dull; pronotum shiny; elytron shiny. Color black except elytron dark brown with large, median, oval, yellow spot (Figs. 332, 333); antenna, mouthparts, propleuron, epipleuron, legs reddish brown; pro-, meso-, metasterna dark brown; abdomen brown except outer 1/4 and sterna 5-6 yellowish brown. Head punctures fine, separated by a diameter or less; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, sparse medially, becoming coarse, contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex shallowly emarginate, clypeus and frons abruptly joined. Epipleuron oblique, grooved internally, descending externally, femoral depression deep. Antenna with 11 articles (Fig. 334). Prosternum with intercoxal carinae narrowly separated at apex, convergent toward base, basally stemmed, reaching basal margin. Protibia not flanged. Postcoxal line on 1st abdominal sternum not extended to posterior sternal margin, rounded along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex truncate. Genitalia with beak of basal unit short, connecting duct short (Fig. 335)

♂. Not known.

Geographical distribution: Colombia.

Specimens examined: 2. Colombia: the lectotype; Huila, Garzón (USNM).

Remarks. This very small species with a single yellow spot on each elytron resembles only *H. howdeni*. *Hyperaspis howdeni* is distinctly larger with a much larger elytral spot.

The ♀ lectotype in the UMZC has lost an elytron, but the remaining elytron and body size match exactly a specimen from Colombia previously identified as *H. guilloryi* by E.A. Chapin in 1954.

46. *Hyperaspis pseudopavida* n. sp.

Type material. Holotype ♀: Brazil, 316, 80.23, *Cleothera pavida* M. Named by Mulsant (BM).

Description. ♀, length 2.2 mm, width 1.8 mm; body form oval, convex. Dorsal surface with head alutaceous, dull; pronotum shiny; elytron shiny. Color black except elytron with 3 small, yellow spots, 1 transversely oval spot at base next to scutellum, 1 rectangular spot on lateral margin posterior to humeral callus, 1 irregularly rounded spot on apical declivity near apical margin, widely separated from suture (Figs. 336, 337); antenna, mouthparts except maxillary palpus, narrow outer margin of propleuron, tibia yellow; maxillary palpus, epipleuron, femora dark brown; abdomen dark brown except outer 1/4 and sterna 5-6 yellowish brown. Head punctures fine, separated by less than to twice a diameter; pronotal punctures fine, larger than head punctures, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures fine, sparse medially, becoming very coarse, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epipleuron oblique, grooved internally, with coarse, cross striations, slightly descending externally, femoral depression deep. Prosternum with intercoxal carinae widely separated at apex, convergent toward base, basally stemmed, reaching basal margin. Protibia not flanged. Postcoxal line on 1st abdominal sternum not extended to posterior sternal margin, rounded along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly emarginate. Genitalia with beak of basal unit large, as long as unit (Fig. 338).

♂. Not known.

Etymology. The species name refers to the resemblance to *Cleo-thera pavid*a Mulsant.

R e m a r k s . There are other black species with 3 pale spots on each elytron, but this is the only one with a single spot next to the scutellum. *Hyperaspis recordata*, described as a variant of *Cleo-thera pavid*a, also has a scutellar spot but only 2 elytral spots.

The holotype is a single ♀ in the BM collection identified by Mulsant himself as *Cleo-thera pavid*a Mulsant, a species he described from Mexican material. However, the BM specimen identified by Mulsant as *C. pavid*a was part of the Deyrolle collection that Mulsant examined in 1853; *C. pavid*a was described by Mulsant in 1850; therefore, the specimen described above cannot be type material of *C. pavid*a (R. Booth, pers. comm.).

47. *Hyperaspis istmina* n. sp.

Type material. Holotype ♀: Colombia, Chocó, Istmina, 31.VIII.'40, LM Murillo No. 5327a (USNM).

D e s c r i p t i o n . ♀, length 2.8 mm, width 2.3 mm; body oval, rounded, convex. Dorsal surface with head slightly alutaceous, shiny; pronotum shiny; elytra shiny. Color black except head yellow; pronotum black with lateral 3/8 yellow; elytron with 1 large, yellow spot extended from humeral callus nearly to apex, spot narrow apically, irregularly widened to truncate apex (Fig. 339, 340); antenna, propleuron yellow; legs reddish yellow; abdominal sterna 1-4 black with lateral 1/3 and sterna 5-6 reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures larger than on elytron, sparse medially, dense, contiguous laterally. Punctures on abdominal sterna larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc slightly alutaceous, finely, sparsely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epipleuron flat, grooved internally, not descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 341). Protibia not flanged. Prosternum with intercox-

al carinae narrowly separated at apex, convergent nearly to basal sternal margin, stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, rounded along margin, apex recurved 5/8 distance to basal sternal margin. Fifth sternum with apex weakly emarginate.

♂. Not known.

Etymology. The species is named for the holotype locality, and the name is used as a noun in apposition.

R e m a r k s . The elytral color pattern is similar only to that of *H. chocoi*, and distinguishes *H. istmina* from other *Hyperaspis* species.

48. *Hyperaspis satipoensis* n. sp.

Type material. Holotype ♀: Peru, Satipo, XI, 1941, coll. by Paprzycki, G.H. Dieke Coll'n.1965 (USNM).

D e s c r i p t i o n . ♀, length 3.0 mm, width 2.4 mm; body rounded, convex. Dorsal surface with head alutaceous, dull: pronotum shiny; elytra shiny. Color black except head yellow; pronotum yellow with basomedian black spot, lateral 1/4 of pronotum yellow, basomedian spot with small, obliquely oval, yellow spot on each side of middle at base; elytron with 3 yellow spots, discal spot near suture anterior to middle roughly triangular, broad, spot near lateral margin laterad of discal spot irregular in shape, large, comma shaped yellow spot on apical declivity (Fig. 342, 343); antenna, mouthparts propleuron, legs reddish yellow; abdominal sterna 1-4 black with lateral 1/4 and sterna 5-6 reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, sparse medially, dense, contiguous laterally. Punctures on abdominal sterna larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epipleuron oblique, grooved internally, descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 334, outer articles lost). Protibia not

flanged. Prosternum with intercoxal carinae widely separated at apex, convergent nearly to basal sternal margin, stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 5/8 distance to basal sternal margin. Fifth sternum with apex broadly arcuate. Genitalia with beak of basal unit short, back of unit heavily sclerotized; connecting duct short (Figs. 345, 346)

♂. Not known.

Etymology. The species is named for Satipo, Peru, the holotype locality.

R e m a r k s . Distinguishing characters for this species are based primarily on dorsal coloration. The pronotum with 2 obliquely oval, median spots at the base is unique with the genus. The 3 spotted elytron with a large, comma-shaped apical spot also differs from that of other species.

49. *Hyperaspis aberttha* n. sp.

Type material. Holotype ♀: Brazil, São Paulo, Capital, 21-X-31 Col. J.P.F., Korschefsky Collection 1952 (USNM).

D e s c r i p t i o n . ♀, length 3.3 mm, width 2.6 mm; body oval, convex. Dorsal surface with head alutaceous, dull; pronotum alutaceous, slightly shiny; elytra shiny. Color black except head yellow with vertex and narrow border next to eye black; pronotum black with lateral 1/4 yellow; elytron with 1 large, yellow, transverse, apical spot near sutural margin, inner margin of spot obliquely truncate (Figs. 347, 348); antenna, propleuron yellow; mouthparts dark brown; proleg reddish yellow; meso-, metaleg reddish yellow except basal 1/2 of femur dark brown; abdominal sterna 1-5 black with lateral 1/4 and sternum 6 reddish yellow. Head punctures fine, separated by a diameter or less; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less to twice a diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, dense, becoming contiguous laterally. Punctures on abdominal sterna larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely, densely punctured throughout; area on 1st abdomi-

nal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epi-pleuron oblique, grooved internally, descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 349). Protibia not flanged. Prosternum with intercoxal carinae narrowly separated at apex, convergent nearly to basal sternal margin, stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 3/8 distance to basal sternal margin. Fifth sternum with apex broadly emarginate. Genitalia with beak of basal unit long; connecting duct long (Figs. 350, 351).

♂. Not known.

Etymology. The specific name is an arbitrary combination of letters.

R e m a r k s . Three other species - *H. apicaspis*, *H. delicata*, and *H. mimula* - have black elytra with a single, yellow apical spot. *Hyperaspis abertha* differs by the much larger size, and spot on elytron large, transverse, with an obliquely truncate inner margin.

50. *Hyperaspis circumclusa* n. sp.

Type material. Holotype ♀: Brazil, Taperina, Acc. No. 2966 (CMP). Paratype ♀: Brazil, Parà-Is. Marajò, Curraliño, III-VI.1988, leg. Gallizia (CCM).

D e s c r i p t i o n . ♀, length 2.2 mm, width 1.8 mm; body rounded, slightly oval, convex. Dorsal surface with head alutaceous, dull: pronotum slightly alutaceous, shiny; elytra shiny. Color reddish yellow except head yellow with yellowish brown clypeus; pronotum dark brown with lateral 1/5 yellow; elytron reddish yellow except lateral and apical margins with wide yellow border from base nearly to suture at apex, sutural margin widely dark brown (Figs. 352, 353); pro-, meso- and metasterna reddish brown; basal abdominal sternum reddish brown medially, remainder of abdomen reddish yellow. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron,

separated by a diameter medially, dense, becoming contiguous laterally. Punctures on abdominal sterna as large as on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epipleuron oblique, grooved internally, descending externally, femoral depressions deep. Antenna with 11 articles. Protibia not flanged (Fig. 354). Prosternum with intercoxal carinae widely separated at apex, convergent nearly to basal sternal margin, stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, slightly flattened along margin, apex recurved $3/8$ distance to basal sternal margin. Fifth sternum with apex broadly emarginate. Genitalia with beak of basal unit short, divided into 2 projections (Figs. 355, 356).

♂. Not known.

Etymology. The species is named for the lateral yellow border encircling nearly the entire body except the head.

Remarks. No other known species of South American *Hyperaspis* has a similar color pattern. The lateral yellow border is the same width throughout, enhancing the circular aspect of the color pattern.

51. *Hyperaspis aemulata* n. sp.

Type material. Holotype ♀: Venezuela, ex Venezuela, Hoboken, N. J. (New Jersey), on *Cattleya*, Hob. (Hoboken) # 934 (specimen intercepted at customs in Hoboken, New Jersey) (USNM).

Description. ♀, length 3.4 mm, width 2.7 mm; body rounded, slightly oval, convex. Dorsal surface with head slightly alutaceous, shiny; pronotum shiny; elytra shiny. Color yellow except pronotum with large, black, basomedian spot extended nearly to anterior margin, lateral margins of spot deeply emarginated with yellow; elytron with 5 dark brown spots and sutural border dark brown in posterior $5/6$, sutural margin slightly widened in apical $1/3$, 1 small, narrowly oval spot between suture and humeral callus, 1 irregularly elongate spot extended from base across humeral callus, 1 oval spot at lateral margin before apical declivity, 1 elongate oval spot on apical declivity between suture and lateral spot, 1 transversely oval api-

cal spot connected to sutural border (Figs. 357, 358); pro-, meso-, metasterna dark brown; abdominal sterna 1-5 reddish brown except lateral 1/4 and sternum 6 yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, becoming dense, contiguous laterally. Punctures on abdominal sterna larger than on elytra, sparse medially, becoming fine, dense laterally, sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex emarginate, clypeus and frons abruptly joined. Epipleuron oblique, not grooved internally, descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 359). Protibia not flanged. Prosternum with intercoxal carinae widely separated at apex, convergent 1/2 distance to base, stem long, reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, slightly flattened along margin, apex recurved 2/3 distance to basal sternal margin. Fifth sternum with apex feebly emarginate. Genitalia with beak of basal unit short, wide; connecting duct long (Fig. 360).

♂. Not known.

Etymology. The specific name is from the Latin *aemulor*, meaning to emulate, referring to the resemblance to other species of *Hyperaspis*.

Remarks. Distinguishing characteristics of *H. aemulata* are the large size, 5 dark spots on each elytron, suture with dark border, and postcoxal line on the basal abdominal sternum recurved 2/3 distance to apical sternal margin.

The dorsal coloration of this species slightly resembles that of *H. matronata*, and more closely, those of *Tenuisvalvae ecoffeti* and *T. notata*.

52. *Hyperaspis dispar* n. sp.

Type material. Holotype ♀: Brazil, Guanabara, Rio de Janeiro, X.1963, M. Alvarenga coll. (USNM). Paratype ♀: same data as holotype (USNM).

Description. ♀, length 3.4 mm, width 2.8 mm; body rounded, slightly oval, convex. Dorsal surface with head alutaceous, dull: pronotum shiny; elytra shiny. Color yellow except head with black spot on each side of vertex, frons with poorly defined, light brown area extended onto clypeus; pronotum with 5 dark brown spots, a large, triangular spot on each side of middle in apical 1/2, transverse basomedian vitta, and small, elongate, oval spot on each side near lateral margin; elytron with 5 spots and sutural margin dark brown, suture bordered from scutellum nearly to apex, 1 large, elongate oval, discal spot near suture in basal 1/2, 1 irregularly oval spot on humeral angle, 1 elongate oval spot on apical declivity near suture, 1 narrow, somewhat triangular spot near lateral margin in apical 1/2, 1 narrowly transverse spot at apex bordering suture (Figs. 361, 362); mouthparts, legs reddish yellow; pro-, meso-, metasterna black; abdomen reddish yellow except basal sterna black medially. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures larger than on elytron, separated by a diameter or less medially, by less than a diameter laterally. Punctures on abdominal sterna larger than on elytra, dense medially, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc shiny, nearly impunctate. Clypeus emarginate apically, clypeus and frons abruptly joined. Epipleuron oblique, grooved internally, descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 363). Protibia not flanged. Prosternum with intercoxal carinae widely separated at apex, convergent toward base, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex feebly emarginate. Genitalia with beak of basal unit absent; connecting duct long (Fig. 365).

♂. Not known.

Etymology. The specific name is the Latin *dispar*, meaning unlike or dissimilar, referring to the distinctive color pattern.

Remarks. This is a large, distinctively marked species not resembling any other member of *Hyperaspis*. Rather, it has the dor-

sal aspect of several species of the tribe Brachiacanthini, and also some species of the coccinelline tribe Synonychini.

53. *Hyperaspis histrionica* (Mulsant, 1850)

Cleothera histrionica Mulsant, 1850: 629.

Hyperaspis histrionica: CROTCH 1874: 222; KORSCHESKY 1931: 190; BLACKWELDER 1945: 447.

Type locality: "Carthagera" (Cartagera, Colombia) (MNHL, lectotype here designated).

Description. ♀, length 2.4 mm; body form elongate, slightly convex. Color black except head dark brown; pronotum dark yellow with black border on median part of base, with triangular black spot fused at apex of central part of border, and small, black, rounded spot laterally; elytron black with yellow lateral border extended from humeral callus posteriorly, not reaching apex, with 6 yellow spots arranged in 3 rows, row 1 from humeral callus toward suture, row 2 median, and row 3 preapical, each row with 2 spots sometimes fused to each other or to lateral border (Figs. 366, 367); mouthparts, legs dark yellow; propleuron yellow; pro-, meso-, metasterna black; abdomen dark brown. Pronotum and elytron with equal size punctures, separated by about 3 times a diameter. Clypeal apex emarginate, clypeus and frons joined at right angle. Epipleuron with femoral depressions. Postcoxal line on 1st abdominal sternum incomplete ♂. Not known.

Variation. None observed.

Geographical distribution: known only from the type locality.

Specimens examined: 1, the lectotype.

Remarks. The species described above is recognized by the presence of 6 yellow, elytral spots arranged in 3 transverse rows.

Hyperaspis histrionica was described by Mulsant from specimens in the Dejean collection. Although Mulsant had more than one specimen when he described this species, only one remains in that collection. This specimen, labeled "Carthagera, Lebas" is designated as the lectotype to stabilize future usage of this name.

This species is known only from the ♀ lectotype; hence, it is placed with species known only from that sex.

Hyperaspis tayronensis closely resembles *H. histrionica* in dorsal color pattern, but we consider them distinct species for the present.

Section II

Species with frons and clypeus smoothly, obliquely joined; protibia widened apically.

vredenburgi group

Species with body slightly flattened; frons and clypeus and clypeus smoothly, obliquely joined; protibia widened apically, slightly flanged; male genitalia with basal lobe narrowed in apical 1/4, apex rounded, with abrupt, hooklike projection on one side (Figs. 376, 376), paramere slender, oval; protibia slightly flanged.

Hyperaspis species with either 10-articled (*H. connectens*) or 11-articled antennae, and smoothly, obliquely joined frons and clypeus, the latter a character shared only with the *conclusa* group. Basal lobe of the male genitalia with an abrupt, hooklike projection on one side is diagnostic for the *vredenburgi* group.

54. *Hyperaspis ayacucho* n. sp.

Type material. Holotype ♂: Venezuela, Exp. Territ. Amazonas, Puerto Ayacucho, June 15, 1950, J. Maldonado Capriles Coll. (USNM). Paratype ♂: Venezuela, Exp. Territ. Amazonas, Mouth Cunucunuma, R., Apr. 2, 1950, J. Maldonado Capriles Coll. (USNM).

Description. ♂, length 2.3 mm, width 1.8 mm; body oval, slightly flattened. Dorsal surface with head alutaceous, weakly shiny; pronotum strongly alutaceous, dull; elytra alutaceous, weakly shiny. Color black except head yellow; pronotum black with anterior 1/6 and lateral 1/5 yellow, basal margin with black area narrowly, briefly emarginated with yellow laterally; elytron with broad, yellow border on basal, lateral and apical margins, basal border enlarged between scutellum and humeral callus, lateral border irregular, apical

border not reaching suture (Fig. 368); antenna, mouthparts yellowish brown; propleuron, epipleuron yellow; proleg with apical 1/3 of tibia, and anterior 1/2 of femur yellow; abdomen black with lateral 1/4 reddish yellow. Head punctures fine, separated by a diameter or less; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures slightly larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, sparse medially, dense, contiguous laterally. Punctures on abdominal sterna larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons smoothly, obliquely joined. Epipleuron slightly oblique, feebly grooved internally, slightly descending externally, femoral depressions deep. Antenna with 11 articles (Fig. 369). Protibia widened apically. Prosternum with intercoxal carinae narrowly separated at apex, parallel 2/3 distance to anterior prosternal margin, not stemmed, not reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum truncate. Genitalia with basal lobe 3/4 as long as paramere, apex narrowly rounded, with small, angulate projection on one margin; paramere oval, tapered from basal 1/4 to rounded apex (Fig. 370); siphon robust, apically straight, with apical membranous area, basal capsule with inner arm long, slender, outer arm slender, as long as inner arm, apically knobbed, basal border slightly emarginate (Figs. 371, 372).

♀ Not known.

Etymology. The species is named for the holotype locality with the name used as a noun in apposition.

Remarks. Characters distinguishing *H. ayacucho* are parallel prosternal carinae not extended to anterior prosternal margin; extremely alutaceous, dull pronotal surface; and broad, yellow elytral border.

55. *Hyperaspis herrerae* n. sp.

Type material. Holotype ♂: Colombia, Magd. (Magdalena), Codazzi, Apr. 20, 1962, J. Herrera collector (USNM).

Description. ♂, length 2.4 mm, width 1.8 mm; body oval, slightly flattened. Dorsal surface with head alutaceous, weakly shiny; pronotum alutaceous, weakly shiny; elytron alutaceous, weakly shiny. Color reddish yellow except head yellow; pronotum with large, black, rectangular basomedian spot, spot widely separated from anterior pronotal margin, anterolateral angle with small projection; elytra with large, more or less triangular spot in middle, spot narrow at scutellum, widened posteriorly onto apical declivity, abruptly narrowed to suture before apex, small, oval, black spot on humeral callus (Fig. 373, 374); venter of head, pro-, meso-, metasterna black; propleuron yellow; abdomen with median area of sterna 1-5 dark brown, lateral 1/4 and sternum 6 reddish yellow. Head punctures fine, separated by less than to twice diameter; pronotal punctures larger than on head, separated by 1 to 3 times diameter; elytral punctures smaller than pronotal punctures, separated by 1 to 3 times a diameter. Metasternal punctures larger than on pronotum, sparse medially, becoming nearly contiguous laterally. Punctures on abdominal sterna 1-4 as large as pronotal punctures, dense medially, becoming fine, dense laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons smoothly, obliquely joined. Epipleuron flat, feebly grooved internally, not descending externally, femoral excavation moderate, not deep. Antenna with 11 articles (Fig. 375). Protibia widened apically. Prosternum with intercoxal carinae narrowly separated at apex, convergent near base, basal stem short, reaching basal pronotal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 5/8 distance to basal sternal margin. Fifth sternum with apex truncate; 6th sternum slightly arcuate. Genitalia with basal lobe 3/4 as long as paramere, apex narrowly rounded, notched in apical 1/2 on one margin; paramere oval, tapered to rounded apex in apical 1/2 (Fig. 376); siphon slender, constricted before apex, apex with membranous area, basal capsule with inner and outer arms slightly elongate, wide (Figs. 377, 378).

♀ Not known.

Etymology. The species is named for J. Herrera, collector of the holotype specimen.

R e m a r k s . The large, triangular elytral spot is unique to this species, and elytral punctures smaller than pronotal punctures are rare in *Hyperaspis*: the elytral punctures are nearly always larger or at least equal in size.

56. *Hyperaspis vredenburgi* n. sp.

Type material. Holotype ♂: Brazil, Rio Negro, Manacapuru, July, 1935, G. V. Vredenburg, Brit. Mus. 1935-615 (BM). Allotype ♀: Same data as holotype (BM). Paratypes, 12. 9, same data as holotype (BM). 3, Trinidad, Caranage, Oct. 14, 1918. A-760, Harold Morrison (USNM).

Description. ♂, length 2.2 mm, width 1.7 mm; body oval, slightly flattened. Dorsal surface with head strongly alutaceous, dull; pronotum alutaceous, dull; elytra alutaceous, dull. Color black except head yellow; pronotum yellow with large, somewhat rectangular, basomedian spot, spot widely separated from anterior margin, basal margin of spot narrower than anterior margin, elytron with 3 yellow spots and lateral margin in apical 2/3 yellow, 1 large, transversely oval scutellar spot, 1 large, irregularly rounded, discal spot near suture connected to lateral yellow border, 1 large, transversely oval spot at apex, yellow lateral border irregular, abruptly widened near apex to join discal spot (Figs. 379, 380); antenna, propleuron, epipleuron yellow; mouthparts reddish brown; pro-, mesolegs reddish yellow; metaleg with femur brown except apical 1/8 yellow, tibia and tarsus yellow except outer margin of tibia brown; abdomen brown with lateral 1/8 reddish yellow. Head punctures fine, hidden in alutaceous sculpture; pronotal punctures larger than on head, separated by less than to 3 times a diameter; elytral punctures slightly larger than pronotal punctures, separated by 1 to 3 times a diameter. Metasternal punctures much larger than on elytron, separated by about a diameter throughout. Punctures on abdominal sterna 1-4 larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons smoothly, obliquely joined. Epipleuron nearly flat, internally grooved, not descending externally, femoral excavations moderate,

not deep. Antenna with 11 articles (Fig. 381). Protibia widened apically. Prosternum with intercoxal carinae narrowly separated, parallel, extended $1/2$ distance to basal margin. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, rounded along margin, apex recurved $5/8$ distance to basal sternal margin. Fifth sternum with apex feebly emarginate; 6th sternum slightly arcuate. Genitalia with basal lobe $3/4$ as long as paramere, apex narrowly rounded, with angulate projection on one margin; paramere wide, tapered from middle to rounded apex; (Fig. 382); siphon short, with membranous area, apically sinuate, basal capsule with inner arm slender, long, outer arm slender, as long as inner arm, apically truncate (Figs. 383, 384).

♀ Similar to male except head black; black spot on pronotum extended to apical margin. Genitalia with beak of basal unit short, connecting duct short (Figs. 385).

Variation. Elytron with yellow lateral border as described above or broken into 2 spots, 1 triangular spot at humeral angle, 1 apical spot joining discal spot.

Etymology. The species is named for the collector of the type series.

Remarks. Elytra with scutellar spots are unusual, and the elytral pattern combined with the short, parallel prosternal carinae distinguishes *H. vredenburghi*. In addition, the consistently dull dorsal surface, lateral metasternal punctures separated by a diameter, and simple protibia will distinguish *H. vredenburghi* from either *H. tayronensis* or *H. laterimaculata*, each of which also has 5 spots on each elytron.

This is another instance of a species described from Amazonian Brazil occurring on Trinidad, with no other localities known. *Tenuis-valvae unipunctata* shares the same distribution.

57. *Hyperaspis festiva* Mulsant, 1850

Hyperaspis festiva Mulsant, 1850: 659; CROTCH 1874: 230; GORHAM 1895: 196; WEISE 1922: 36; KORSCHESKY 1931: 188; BRÈTHES 1925a: 204; BLACKWELDER 1945: 447; GORDON 1987: 29.

Hyperaspis cincticollis Mulsant, 1850: 553; CROTCH 1874: 230; GORDON 1987: 29.

Cleothera cincticollis: GORHAM 1895: 195.

Hyperaspis festiva ab. *cincticollis*: KORSCHESKY 1931: 188; BLACKWELDER 1945: 447.

Hyperaspis lemniscata: Boheman, 1859: 205; CROTCH 1874: 227; BRÈTHES 1925b: 203 (synonym of *H. festiva*).

Hyperaspis festiva ab. *lemniscata*: KORSCHESKY 1931: 188.

Hyperaspis festiva var. *apicalis* Weise, 1885: 167; KORSCHESKY 1931: 188.

Hyperaspis juniapuca Brèthes, 1925b: 5; KORSCHESKY 1931: 290; BLACKWELDER 1945: 447. (**n. syn.**).

Type locality: of *festiva*, Brazil (UMZC, lectotype designated by GORDON 1987); of *cincticollis*, Colombia (MNHP, lectotype here designated); of *lemniscata*, unknown; of *apicalis*, Puerto Rico (ZMHB, lectotype here designated); of *juniapuca*, Brazil, Río Junia-puca (Amazones) (BM, holotype).

Description. ♂, length 2.0 mm, width 1.4 mm; body elongate, oval, slightly flattened. Dorsal surface with head slightly alutaceous, feebly shiny; pronotum alutaceous, dull; elytron alutaceous, slightly shiny. Color black except head yellow with vertex black; pronotum black with anterior border narrowly yellow, lateral 1/8 yellow, median black area deeply emarginated basally by extension of lateral yellow spot; elytron with lateral and apical margins narrowly, irregularly bordered with yellow, yellow border apically recurved onto apical declivity, apex enlarged, 1 triangular discal spot anterior to middle (Fig. 388); antenna, mouthparts, legs reddish brown; propleuron, epipleuron yellow; abdomen with median area dark brown, lateral 1/4 reddish yellow. Head punctures fine, separated by a diameter or less; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternum with punctures larger than on elytron, punctures separated by a diameter medially, lateral punctures separated by less than a diameter. Punctures on abdomen coarse, dense on sterna 1-4, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc alutaceous, nearly impunctate. Clypeal apex deeply emarginate, clypeus and frons smoothly, obliquely joined. Epipleuron flat, internally grooved, slightly descending externally, femoral excavations moderate, not deep. Antenna with 11 articles (Fig. 397). Prosternum with intercoxal carinae narrowly separated at apex, convergent toward base, pinched medially, extended 3/4 distance to anterior prosternal margin, not stemmed, not reaching

basal margin. Protibia widened apically. Basal abdominal sternum with apical margin sinuate. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex truncate; 6th sternum truncate. Genitalia with basal lobe 7/8 length of paramere, tapered to narrowly rounded apex in apical 1/4, with abrupt, angulate projection on one margin; paramere narrow, tapered from basal 1/4 to rounded apex (Fig. 398); siphon robust, long, apex with membranous area, basal capsule with inner arm long, slender, outer arm shorter than inner arm, slender, curved, basal border deeply emarginate (Figs. 399, 400).

♀ Similar to male except head black. Genitalia with beak of basal unit short, connecting duct short (Fig. 401).

Variation. Length 2.0 to 2.7 mm, width 1.4 to 2.0 mm. Elytral color extremely variable, discal spot often narrowly or widely connected to spot on apical declivity; discal spot may be enlarged to contact lateral yellow border; lateral yellow border often broken before apex, leaving apical spot free; size of elytral spots variable (Figs. 386-396).

Geographical distribution: Mexico and Caribbean islands south to Argentina and Bolivia. Recorded in the literature from the United States, but not present there.

Specimens examined: 321. Many localities, specimens present in nearly every collection examined (BM) (CAS) (CDA) (CMP) (DEI) (MBR) (SMTD) (USNM) (ZMHB).

Remarks. *Hyperaspis festiva* is widely distributed throughout South America except Chile. It is frequently found and collected, and has a somewhat unstable color pattern. However, the pronotum with the median black area deeply emarginated basally by an extension of the lateral yellow border is an excellent, remarkably stable one. In addition, the prosternal carinae do not reach the basal sternal margin, and the discal spot on each elytron, when present, is nearly always triangular.

The lectotype of *H. cincticollis*, here designated to stabilize future usage of this name, bears the labels "Type/Coll. Mniszech".

The holotype of *H. juniapuca* has male genitalia identical to those of typical *H. festiva*, and we consider it a junior synonym of *H. festiva*. Two female syntypes of *H. festiva* var. *apicalis* are in

the ZMHB collection. The first of these, labeled "Portorico/*Hyperaspis apicalis* (handwritten)/ ex Coll. J. Weise", is designated as lectotype. The second syntype, bearing identical labels but lacking the handwritten name, is designated as paralectotype. A syntype of *H. festiva* in the DEI collection labeled "Brasil Schaum/Coll. Haag/Syntypus (pink paper)/*festiva* mls. typ" is designated as paralectotype.

58. *Hyperaspis germainii* Crotch, 1874

Hyperaspis germainii Crotch, 1874: 228; KORSCHESKY 1931: 189; BLACKWELDER 1945: 447; GORDON 1987: 29.

Type locality: Chile (UMZC, holotype, GORDON 1987).

Description. ♂, length 2.5 mm, width 1.8 mm; body elongate, oval, slightly flattened. Dorsal surface with head slightly alutaceous, shiny; pronotum alutaceous, feebly shiny; elytron slightly alutaceous, shiny. Color black except head yellow with black vertex and narrow border along eye black; pronotum with anterior margin narrowly yellow, anterolateral angle broadly yellow, yellow area nearly reaching posterolateral angle; elytron with basal yellow border extended to lateral margin and posteriorly onto apical declivity, then inward nearly to suture, 1 small, irregularly rounded, discal spot posterior to middle (Figs. 402, 403); antenna, mouthparts, epipleuron, proleg reddish yellow; propleuron yellow; meso- and metaleg reddish yellow with femora dark brown; abdomen with median area dark brown, lateral 1/4 dark reddish brown. Head punctures fine, separated by less than to twice a diameter; pronotal punctures as large as on head, separated by 1 to 3 times a diameter; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternum with punctures much larger than on elytron, punctures separated by a diameter medially, lateral punctures separated by less than a diameter. Punctures on abdominal sterna larger than on elytra, sparse on sterna 1-4, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside post-coxal arc shiny, nearly impunctate. Clypeal apex deeply emarginate, clypeus and frons smoothly, obliquely joined. Epipleuron slightly oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 404). Prosternum with

intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed, reaching basal margin (Fig. 405). Protibia widened apically. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, rounded along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex truncate; 6th sternum truncate. Genitalia with basal lobe nearly as long as paramere, apex narrow, obliquely rounded, with large, angulate projection on one margin; paramere narrow, tapered from basal 1/4 to rounded apex (Fig. 406); siphon slender, apex sinuate, with membranous area, basal capsule with inner arm long, slender, outer arm as long as inner arm, widened to apex, apically knobbed, basal border emarginate (Figs. 407, 408).

♀ Similar to ♂ except head black; anterior margin of pronotum black. Genitalia with beak of basal unit long, connecting duct short (Fig. 409).

Variation. Length 2.4 to 3.0 mm, width 1.8 to 2.4 mm. Apex of yellow border on elytron may be separated, forming a single spot on apical declivity.

Geographical distribution: Argentina, Chile.

Specimens examined: 24. Chile: Angol; Cauquenes; Chillan; Concepción; Escuadron; Colorada; Hualqui; Curico, Peidras Negras; El Radal, Cordillera Talca; Nuble, Estero Bulileo; Santiago (CAS) (CCM) (CMP) (MNHS) (MSNG) (USNM) (ZMHB).

Remarks. The Chilean *Hyperaspis* fauna is very limited, and *H. germainii* has a color pattern unlike that of other Chilean species, rendering it easily recognizable.

59. *Hyperaspis connectens* (Thunberg, 1808)

Coccinella connectens Thunberg, 1808: 157.

Hyperaspis connectens: MULSANT 1850: 662; CROTCH 1874: 230; KORSCHESKY 1931: 186; DOBZHANSKY 1941: 25; GORDON 1985: 473; GORDON 1987: 29.

Hyperaspis lengi Schaeffer, 1905: 144; DOBZHANSKY 1941: 25; GORDON 1985: 473.

Description. ♂, length 2.6 mm, width 1.9 mm; body elongate, oval, slightly flattened. Dorsal surface with head slightly alutaceous, shiny; pronotum alutaceous, feebly shiny; elytron slightly alutaceous, shiny. Color black except head yellow; pronotum yellow

with median 1/2 black, black area extended to anterior pronotal margin, lateral margins slightly emarginated with yellow; elytron with 2 large, yellow spots connected on apical declivity, 1 spot transverse on disc anterior to middle, 1 transverse apical spot separated from suture (Figs. 410, 411); antenna, mouthparts yellowish brown; propleuron yellow; legs reddish yellow except femora dark brown with apical 1/6 reddish yellow; abdomen with median area dark brown, lateral 1/4 reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures as large as on head, separated by a less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternum with punctures much larger than on elytron, sparse medially, separated by less than a diameter laterally. Punctures on abdominal sterna larger than on elytra, sparse on sterna 1-4, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctate. Clypeal apex deeply emarginate, clypeus and frons smoothly, obliquely joined. Epipleuron flat, slightly grooved internally, not descending externally, femoral depressions moderate, not deep. Antenna with 10 articles (Fig. 413). Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, joined before base, basally stemmed, not reaching basal margin. Protibia widened apically. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, slightly flattened along margin, apex recurved 1/4 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum nearly truncate. Genitalia with basal lobe 3/4 as long as paramere, apex obliquely rounded, with large, angulate projection on one margin; paramere oval, tapered from basal 1/4 to rounded apex (Fig. 415); siphon slender, apex straight with membranous area, basal capsule with inner arm long, wide, outer arm as long as inner arm, basal border deeply emarginate (Figs. 416, 417).

♀ Similar to ♂ except head black, clypeus reddish yellow; anterior margin of pronotum black. Genitalia with beak of basal unit long, connecting duct short (Fig. 418).

Variation. Length 2.3 to 3.0 mm, width 1.7 to 2.4 mm. Elytron with yellow spots broadly or narrowly connected, or elytron entirely yellow except basal, sutural, and lateral border in apical 1/2 black (Fig. 412); ♀ head varies from clypeus narrowly reddish yellow to having reddish yellow area extended onto frons.

Type locality: of *connectens*, "Habitat in insula St. Eustachii" (type not examined); of *lengi*, Brownsville, Texas (USNM, lectotype designated by GORDON 1985).

Geographical distribution: Southern United States south through Central America and the Caribbean Islands to northern South America.

Specimens examined: 57 (including 3 from Venezuela). Venezuela. Barquisimento; Tocayo (Present in most collections).

R e m a r k s . The typical dorsal color pattern is distinctive for the South American fauna. Many specimens were examined, nearly all from areas other than northern South America. It appears that *H. connectens* is marginally established in coastal Venezuela.

This is the only species belonging to Section II with 10-articled antennae.

conclusa group

Hyperaspis species having 11-articled antennae; body dorsoventrally flattened; frons and clypeus smoothly, obliquely joined; epipleural depressions for reception of femoral apices moderate or shallow, never deep; protibia widened apically; basal lobe of male genitalia usually long, weakly asymmetrical (except *H. elegantissima*) (Figs. 426, 443); and most species with incomplete prosternal carinae. The extremely flattened *H. longula* and *H. prolata* are the only species observed in any group with the posterior margin of the basal abdominal sternum sinuate.

60. *Hyperaspis ingrata* (Mulsant, 1850)

Cleothera ingrata Mulsant, 1850: 644.

Hyperaspis ingrata: CROTCH 1874: 223; KORSCHESKY 1931: 190; BLACKWELDER 1945: 447.

Type locality. "Cayenne" (French Guiana) (MHNL, lectotype here designated).

D e s c r i p t i o n . ♀, length 2.4 mm; body short, oval. Color black except anterior border of pronotum yellowish red; elytron with

oval, elongate, reddish yellow spot (Fig. 419); mouthparts, legs, yellowish red; ventral surface blackish brown. Pronotum and scutellum with deep, coarse punctures separated by 2 or 3 times a diameter; elytron with punctures as large as on pronotum, separated by 3 to 5 times a diameter. Clypeal apex emarginate. Epipleuron flat, not internally grooved, not descending externally, femoral excavations moderate, not deep. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved. Genitalia with beak of basal unit long, connecting duct short (Figs. 420, 421).

♂ Not known.

Variation: none observed.

Geographical distribution: known only from the type locality.

Specimens examined: 1 (lectotype).

Remarks. This species is known only from the ♀ lectotype, and is readily distinguished from other members of Section II by the elytral color pattern and distribution.

The ♀ lectotype here designated to stabilize future usage of the name is labeled "Cayenne, Lacordaire."

61. *Hyperaspis funesta* (Germain, 1854)

Coccinella funesta Germain, 1854: 335.

Hyperaspis funesta: BRÈTHES 1923: 454; KORSCHESKY 1931: 189; BLACKWELDER 1945: 447.

Hyperaspis chilensis Crotch, 1874: 231; BRÈTHES 1923: 454 (as a synonym of *funesta*); KORSCHESKY 1931: 189; BLACKWELDER 1945: 447; GORDON 1987: 29.

Type locality: of *funesta*, "provincia de Santiago" (Chile) (MHNS); of *chilensis*, Chile (UMZC, lectotype designated by GORDON 1987).

Description. ♂, length 2.3 mm, width 1.7 mm; body elongate, oval, flattened. Dorsal surface with head slightly alutaceous, shiny; pronotum shiny; elytron shiny. Color black except head yellow; pronotum black with anterior and lateral borders narrowly yellow; elytron with 1 irregularly transverse, yellow spot medially on lateral margin, spot extended internally 5/8 distance to sutural margin (Figs. 422, 423); antenna, propleuron yellow; mouthparts,

epipleuron, proleg reddish yellow; propleuron, epipleuron yellow; pro- and mesolegs reddish yellow; metaleg with femur dark brown; abdomen dark brown except lateral 1/8 reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures as large as pronotal punctures, separated by 1 to 2 times a diameter. Metasternum with punctures larger than on elytron, punctures absent medially, lateral punctures dense, becoming contiguous. Punctures on abdomen coarse, dense on sterna 1-4, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctate. Clypeal apex emarginate. Epipleuron flat, not internally grooved, not descending externally, femoral excavations moderate, not deep. Antenna with 11 articles (Fig. 424). Prosternum with intercoxal carinae widely separated at apex, convergent toward base, basally stemmed, reaching basal sternal margin. Protibia widened apically. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex recurved 5/8 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum weakly emarginate. Genitalia with basal lobe nearly as long as paramere, apex narrowly rounded on one side, with gradual, slightly angulate projection on one margin; paramere oval, tapered from basal 1/4 to rounded apex; (Fig. 426); siphon slender, long, apex with membranous area, basal capsule with inner arm long, slender, outer arm shorter than inner arm, narrow, basal border slightly emarginate (Figs. 427, 428).

♀ Similar to ♂ except head black; anterior pronotal margin black. Genitalia with beak of basal unit long, connecting duct short (Fig. 429).

Variation. Length 1.9 to 2.4 mm, width 1.5 to 1.7 mm. Male head entirely yellow or with black vertex; elytron with yellow spot occasionally separated from lateral margin.

Geographical distribution: Argentina, Chile.

Specimens examined: 49. Argentina: Chubut, El Hoyo; Rio Negro, El Bolson, Rio Ternerero. Chile: Aconcagua, Illapel; Aconcagua, Papudo; Cauquenes; Coquimbo, Rio Los Molles; Lican Ray, Cautin; Linares; Santiago, Apoquindo; Santiago, Guyacán Santiago, Renca; Santiago, San Jose; Santiago, Cerra Calan; Valdivia, Panqui-

pulla; Victoria. (BM) (CAS) (CCM) (CMP) (CNC) (GG) (MNHS) (SMTD) (USNM) (ZMHB).

R e m a r k s . This species occurs in Chile and western Argentina; it is the only species of *Hyperaspis* with a single yellow spot on each elytron. The ♂ genitalia differ little from those of *H. nana*, and the 2 species are otherwise very similar. *Hyperaspis nana* might be a color form of *H. funesta*, but that cannot be stated with certainty at present.

When CROTCH (1874) described *H. chilensis*, he was obviously unaware of GERMAIN's (1854) description of *H. funesta*, because he does not mention the latter name in his monograph. In addition, Crotch's type specimens of *H. chilensis* came from Germain himself. The BM has two specimens of this species here designated paralectotypes. The first specimen is labeled "37318/ Reed/ Type/ Chili/ *Hyperaspis chilensis* Crotch/ *Chilensis*/ Fry Coll 1905.100/?Syntype *Hyperaspis chilensis* Cr. det. R. Booth 2004." The second specimen is labeled "Reed/ Chili/ Fry Coll 1905.100/ ?Syntype *Hyperaspis chilensis* Cr. det. R. Booth 2004." The specimens are considered paralectotypes because they came from the Fry collection, which Crotch certainly had available to him as evidenced by his descriptions of several other species from that collection.

62. *Hyperaspis nana* Mader, 1957

Hyperaspis nana Mader, 1957: 82.

Type locality: Chile, Quillota (MHNS, holotype).

D e s c r i p t i o n . ♂, length 2.0 mm, width 1.4 mm; body elongate, oval, slightly flattened. Dorsal surface with head slightly alutaceous, shiny; pronotum shiny; elytron shiny. Color black except head yellow with vertex black; pronotum black with anterior and lateral borders narrowly yellow; elytron with lateral and apical margins narrowly, irregularly bordered with yellow, yellow border apically separated from elytral margin, 1 irregularly oval scutellar spot at base, 1 large, oval, median discal spot posterior to middle (Figs. 430, 431); antenna, mouthparts, propleuron, epipleuron yellow; proleg reddish yellow; mesoleg reddish yellow except posterior 1/2 of femur dark brown; metaleg dark brown; abdomen entirely

dark brown except basal sternum bright yellow outside of postcoxal arc, sterna 2-6 with narrow lateral margin reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures as large as pronotal punctures, separated by less than to twice a diameter. Metasternum with punctures larger than on elytron, punctures nearly absent medially, lateral punctures becoming contiguous. Punctures on abdomen coarse, dense on sterna 1-4, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, densely punctate. Clypeal apex emarginate. Epipleuron flat, internally grooved, not descending externally, femoral excavations moderate, not deep. Antenna with 11 articles. Prosternum with intercoxal carinae narrowly separated at apex, convergent toward base, basally stemmed, reaching basal sternal margin. Protibia widened apically. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, rounded along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum weakly emarginate. Genitalia with basal lobe as long as paramere, apex narrowly rounded on one side, with gradual, rounded projection on one margin; paramere oval, tapered from basal 1/4 to rounded apex; (Fig. 432); siphon slender, long, apex with membranous area, basal capsule with inner arm short, slender, outer arm as long as inner arm, wide, curved, apically knobbed, basal border deeply emarginate (Figs. 433, 434).

♀ Similar to ♂ except head black; anterior pronotal margin black. Genitalia with beak of basal unit long (Figs. 435, 436).

Variation. Length 2.0 to 2.3 mm, width 1.4 to 1.7 mm. Elytron varies from that described above to scutellar spot connected to lateral yellow border, or scutellar spot connected to lateral border and feebly connected to apical yellow border, with lateral border incomplete behind humeral callus, leaving small, triangular, yellow spot at anterolateral angle of elytron, or discal spot and lateral border forming large, yellow spot in apical 1/2, spot sometimes with small, central, black spot.

Geographical distribution: Chile.

Specimens examined: 22. Chile: Aconcagua, Rio Blanco; Aconcagua, Papudo; Angol; Los Petos, (illegible name); Santiago, Cerro Calan, Las Condes; Chillan; Santiago, San Bernardo Valparaiso, La

Cruz. (CAS) (CCM) (GG) (MNHS) (USNM).

R e m a r k s : *Hyperaspis nana* is the only Chilean species with a scutellar spot on each elytron. The dorsal color pattern otherwise resembles that of *H. funesta*.

63. *Hyperaspis sphaeridioides* Mulsant, 1850

Hyperaspis sphaeridioides Mulsant, 1850: 665; CROTCH 1874: 231; BRÈTHES 1923: 454; KORSCHESKY 1931: 197; BLACKWELDER 1945: 448; GORDON 1987: 29.

Coccinella cruciata Germain, 1854: 336.

Hyperaspis cruciata: BRÈTHES 1923: 454 (as synonym of *sphaeridioides*); KORSCHESKY 1931: 197; BLACKWELDER 1945: 448.

Type locality: Chile. Type depository of *sphaeridioides*, MHNL (lectotype here designated); of *cruciata*, MHNS (lectotype here designated).

D e s c r i p t i o n . ♂, length 2.4 mm, width 1.7 mm; body elongate, oval, flattened. Dorsal surface with head slightly alutaceous, shiny; pronotum alutaceous, slightly shiny; elytron shiny. Color black except head yellow with vertex black; pronotum yellow with large, black, basomedian spot, spot widely separated from anterior margin, lateral margin tapered from apex to base; elytron with discal and apical yellow spots connected to median lateral and apical lateral spots, forming 2 irregular bands (Figs. 437, 438); antenna, propleuron, epipleuron yellow; mouthparts, legs brown; abdomen entirely dark brown except lateral 1/6 brownish yellow. Head punctures fine, separated by 2 to 3 times a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternum with punctures larger than on elytron, absent medially, lateral punctures becoming contiguous. Punctures on abdomen coarse, dense on sterna 1-4, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, densely punctate. Clypeal apex emarginate. Epipleuron flat, internally grooved, not descending externally, femoral excavations shallow. Antenna with 11 articles (Fig. 441). Prosternum with intercoxal carinae narrowly separated at apex, parallel toward base, reaching 2/3 distance to sternal margin, not stemmed. Protibia widened apically. Postcoxal line on 1st abdominal sternum

reaching posterior sternal margin, slightly flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex truncate; 6th sternum weakly emarginate. Genitalia with basal lobe slightly shorter than paramere, apex narrowly rounded on one side, with gradual, slightly angulate projection on one margin; paramere oval, tapered from basal 1/2 to rounded apex; (Figs. 443, 444); siphon slender, long, apex with membranous area, basal capsule with inner arm short, slender, outer arm longer than inner arm, enlarged apically, basal border deeply emarginate (Figs. 445, 446).

♀ Similar to ♂ except head black; anterior pronotal margin black. Genitalia with beak of basal unit long, connecting duct short (Figs. 447, 448).

Variation. Length 2.3 to 2.7 mm, width 1.7 to 1.9 mm. Elytron varies from that described above to having elytral spots narrowly connected (Figs. 439, 440), to having spots on elytron broadly connected, forming large, lateral, yellow spot medially emarginated with black on inner border.

Geographical distribution: Chile.

Specimens examined: 247. Chile: many localities (BM) (CAS) (CCM) (CMP) (CNC) (GG) (MBR) (MNHS) (MSNG) (USNM).

R e m a r k s . *Hyperaspis sphaeridioides* is another strictly Chilean species distinguished by the dorsal color pattern. Although variable, pronotal and elytral patterns do not overlap variations found in the other Chilean species.

The lectotype of *H. sphaeridioides* here designated to stabilize future usage of the name bears no labels.

64. *Hyperaspis conclusa* Weise, 1906

Hyperaspis conclusa Weise, 1906: 197; KORSCHESKY 1931: 186; BLACKWELDER 1945: 446.

Hyperaspis flavolineata Mader, 1957: 83. (**n. syn.**)

Type locality: of *conclusa*, Argentina, Tucuman (MBR, lectotype here designated); of *flavolineata*, Bolivia, Lago Titicaca, Copacabana, 3850 m (MHNS).

D e s c r i p t i o n . ♂, length 2.2 mm, width 1.5 mm; body elongate, oval, flattened. Dorsal surface with head slightly alutaceous,

shiny; pronotum shiny; elytron shiny. Color black except head yellow; pronotum yellow with large, basomedian black spot, spot widely separated from anterior and lateral angles, 1 small, irregular, free brown spot in lateral 1/4 of pronotum; elytron vittate, lateral and apical margins with yellow border, median vitta extended from base inside humeral callus to apical border, vitta enlarged at base, narrow toward apex (Figs. 449, 450); antenna, mouthparts, propleuron, epipleuron yellow; legs reddish yellow; abdomen dark brown except lateral 1/5 and sterna 5-6 reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternum with punctures larger than on elytron, punctures sparse medially, becoming dense, nearly contiguous laterally. Punctures on abdomen slightly larger than on elytron, sparse on sterna 1-4, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc shiny, sparsely punctate. Clypeal apex emarginate. Epipleuron flat slightly grooved internally, not descending externally, femoral excavations shallow. Antenna with 11 articles (Fig. 453). Prosternum with intercoxal carinae widely separated at apex, convergent toward base, basally stemmed, reaching basal sternal margin. Protibia widened apically. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, slightly flattened along margin, apex recurved 5/8 distance to basal sternal margin. Fifth sternum with apex broadly, weakly emarginate; 6th sternum weakly emarginate. Genitalia with basal lobe as long as paramere, apex narrowly rounded on one side, with gradual, rounded projection on one margin; paramere oval, tapered from basal 1/4 to rounded apex; (Fig. 454); siphon slender, long, apex with membranous area, basal capsule with inner arm long, slender, outer arm shorter than inner arm, wide, basal border emarginate (Figs. 455, 456).

♀ Similar to ♂ except head black; anterior pronotal margin black, basomedian black spot enlarged laterally to include free spot. Genitalia with beak of basal unit short, connecting duct short (Fig. 457).

Variation. Length 1.9 to 2.2 mm, width 1.4 to 1.5 mm. Pronotum may have lateral free spot absorbed by basomedian spot or be narrowly connected. Elytral ground color varies from black to brown; central vitta and lateral yellow border vary in width (Figs.

451, 452) with a single specimen from Valchete, Argentina, having vittae so wide the elytral ground color is yellow with brown vitta.

Geographical distribution: Southern South America.

Specimens examined: 33. Argentina: Cajamarca; Chaco, Fontana; Cordoba, Alta Gracia; Jujuy, San Juancito; La Rioja; Mendoza, Poterillos; Salta, Guemes; Valchete. Bolivia: Lago Titicaca, Copacabana; Saavedra, Santa Cruz. Brazil: Corumba. Uruguay: Artigas, Colonia Palma; Carrasco (BM) (CAS) (CMP) (MBR) (MHNS) (USNM).

Remarks. Vittate species are rare in the South American *Hyperaspis* fauna, and *H. conclusa* resembles only *H. elegantissima* in this character. The latter species has very narrow elytral vittae, and ♂ genitalia with a short basal lobe strongly angulate on one margin. *Hyperaspis conclusa* has wide elytral vittae, and male genitalia with a basal lobe as long as the paramere, feebly angulate on one margin. A single ♀ specimen from Venezuela appears to be this species, but more likely represents an undescribed species.

The ♀ holotype of *Hyperaspis flavolineata* Mader appears to be identical to typical specimens of *H. conclusa*.

The lectotype of *H. conclusa*, here designated to stabilize future usage of the name, is labeled "Rep. Argentina, Prov. Tucuman, 5-III-1900, C. Bruch/TYPUS/*Hyperaspis conclusa* Weise". A paralectotype in the ZMHB is bears the same locality label with additional labels "*Hyperaspis conclusa* W./Syntypus *Hyperaspis conclusa* Weise, 1906, labeled by MNHUB 2004 (red paper)".

65. *Hyperaspis arida* n. sp.

Type material. Holotype ♂: Peru, Lambayeque, Roadside veg., 1 mile S.E. of town, 20.viii.1971, fertile irrigate (sic !) region in arid coastal desert, P.S. & H.L. Broomfield, B.M. 1971-486. (BM). Allotype ♀: same data as holotype (BM). Paratypes, 21: same data as holotype. (BM) (USNM).

Description. ♂, length 2.4 mm, width 1.8 mm; body form oval, slightly flattened. Dorsal surface with head alutaceous, feebly shiny; pronotum alutaceous, slightly shiny; elytron shiny. Color yellow except head with black vertex; pronotum with basomedian

black spot, spot widely separated from anterior margin, with anterolateral, earlike projection, narrowed from apical 1/3 to base; elytron with base near scutellum and sutural margin black, 3 median spots present from base to apex, black sutural margin irregular, slightly expanded at apical declivity, 1 elongate spot from base to just across humeral callus, large, median spot at apical declivity, and 1 small, transverse, subapical spot joined to sutural margin (Fig. 458); pro-, meso-, metasterna black; abdomen dark brown except outer 1/4 and sterna 4-6 yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Pro- and mesosterna very coarsely punctured medially, punctures nearly contiguous. Metasternal punctures larger than on elytron, separated by a diameter medially, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, dense medially, becoming dense, fine laterally; sterna 5-6 finely, densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, densely punctured. Clypeal apex emarginate. Epipleuron flat, grooved internally, not descending externally, femoral depressions shallow, nearly absent. Prosternum with intercoxal carinae narrowly separated at apex, convergent nearly to basal margin, with short stem reaching margin. Protibia widened apically. Postcoxal line on 1st abdominal sternum not extended to posterior sternal margin, slightly flattened along margin, apex recurved 2/3 distance to basal sternal margin. Fifth sternum with apex truncate; 6th sternum truncate. Genitalia with basal lobe 3/4 length of paramere, apex narrowly, obliquely rounded, with large, weakly angulate projection on one side; paramere slender, tapered to rounded apex in apical 3/4 (Fig. 459); siphon robust, straight apically, apex with membranous area, basal capsule with inner arm short, wide, apically knobbed, outer arm wide, as long as inner arm, apically knobbed (Figs. 460, 461).

♀ Similar to ♂ except head black. Genitalia with basal unit slender, curved, beak composed of small, winglike projection on each side (Fig. 463).

Variation. Length 2.3 to 3.6 mm, width 2.4 to 2.6 mm. Elytron often with basal border entirely black from sutural margin to spot at humeral callus, incorporating that spot; remaining elytral spots vary slightly in size.

Etymology. The specific name is the Latin *aridus*, meaning dry, referring to the Peruvian coastal desert type locality.

Remarks. Superficially this species is a pale version of *H. festiva*. The pronotal maculation is particularly similar, but the shallow femoral depressions on the epipleuron, extremely coarse, dense pro- and mesosternal punctation, elytra with black spots on a yellow ground color, and basal unit of female spermathca with the peculiar winged beak distinguish *H. arida*.

66. *Hyperaspis elegantissima* Brèthes, 1925

Hyperaspis elegantissima Brèthes, 1925a: 206; KORSCHESKY 1931: 188; BLACKWELDER 1945: 447.

Type locality: Argentina, Estancia La Noria, Rio San Javier, Santa Fé (BM, holotype).

Description. ♂, length 2.0 mm, width 1.5 mm; body elongate, oval, convex. Dorsal surface with head slightly alutaceous, shiny; pronotum slightly alutaceous, shiny; elytron shiny. Color black except head yellow with black vertex; pronotum with anterior margin narrowly yellow, median black area with large, lateral ear-like projection in lateral 1/4; elytron with lateral and apical margins narrowly yellow, narrowly sinuate vitta on elytron from base inside humeral callus to apical yellow border (Fig. 466); antenna, propleuron, epipleuron yellow; mouthparts, pro- and mesoleg brownish yellow; metaleg dark brown; abdomen with median area of sterna 1-5 dark brown, lateral 1/4 and sterna 5-6 dark reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated less than to twice a diameter. Metasternum impunctate medially, lateral punctures larger than on elytron, separated by less than a diameter. Punctures on all abdominal sterna larger than on elytra, sparse on sterna 1-2, becoming more dense on sterna 3-6; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron flat, not internally grooved, not descending externally, femoral excavations nearly absent, only slight depressions pres-

ent. Antenna with 11 articles (Fig. 467). Prosternum with intercoxal carinae narrowly separated at apex, convergent from apex toward base, basally stemmed, reaching basal margin. Protibia widened apically. Postcoxal line on 1st abdominal sternum not reaching posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex truncate; 6th sternum truncate. Genitalia with basal lobe 3/4 as long as paramere, apex narrow, obliquely rounded, with large, angulate projection on one margin; paramere wide, tapered from middle to rounded apex; (Fig. 468); siphon slender, apex straight, basal capsule with inner arm long, slender, outer arm as long as inner arm, basal border deeply emarginate (Figs. 469, 470).

♀ Similar to ♂ except head black; anterior margin of pronotum black, lateral margin narrowly yellow, median black area without earlike projection. Genitalia with beak of basal unit long, connecting duct short (Fig. 471).

Variation. Length 1.8 to 2.0 mm, width 1.4 to 1.5 mm. Vitta on elytron often broken medially, width slightly variable (Figs. 464, 465).

Geographical distribution: Argentina.

Specimens examined: 5. Argentina: San Juan, San Juan City; San Luis, San Juan, Jachal; San Luis City; Salta; Salta, Rosario de Lerma. (USNM) (ZMHB).

Remarks. This is one of two truly vittate species in South America. It has typical characteristics of the *conclusa* group except for male genitalia, which have a basal lobe of the type found in the *onerata* Group. BRÈTHES (1925a) aptly named this species *H. elegantissima*.

BRÈTHES (1925b) specifically stated that he had a single specimen; therefore, that specimen is the holotype. The holotype in the BM collection is labeled "Type (orange bordered disc)/ Estancia la Noria, Rio San Javier, Santa Fe, Argentine/ G. E. Bryant 6.1.1912/ *Hyperaspis elegantissima* Brèthes/ J. Brèthes det. 1924."

67. *Hyperaspis longula* Weise, 1922

Hyperaspis longula Weise, 1922: 35; KORSCHESKY 1931: 101; BLACKWELDER 1945: 447.

Type locality: Argentina, Buenos Aires (MBR, lectotype here designated).

Description. ♂, length 2.6 mm, width 1.5 mm; body elongate, slender, nearly parallel sided, flattened. Dorsal surface with head alutaceous, feebly shiny; pronotum strongly alutaceous, dull; elytron alutaceous, slightly shiny. Color black except head yellow; pronotum black with lateral $1/6$ yellow, yellow border emarginated by broad, earlike projection of black area; elytron with 3 yellow spots, 1 triangular spot on anterior portion of disc, 1 sinuate spot on lateral margin medially, 1 transversely oval, subapical spot (Figs. 472, 473); antenna, mouthparts, propleuron yellow; epipleuron reddish yellow; abdomen with median area dark brown, lateral $1/4$ reddish brown. Head punctures fine, separated by a diameter or less; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternum with punctures larger than on elytron, punctures separated by a diameter medially, lateral punctures separated by less than a diameter. Punctures on abdomen coarse, dense on sterna 1-4, becoming fine, dense laterally and on sterna 5-6; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, densely punctate. Clypeal apex emarginate. Epipleuron flat, not internally grooved, not descending externally, femoral excavations shallow, nearly absent. Antenna with 11 articles (Fig. 476). Prosternum with intercoxal carinae narrowly separated at apex, parallel $5/8$ distance to anterior prosternal margin, not convergent, not stemmed, not reaching basal margin. Protibia widened apically. Basal abdominal sternum with apical margin sinuate. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex abruptly recurved, nearly reaching basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum feebly emarginate. Genitalia with basal lobe nearly as long as paramere, apex narrow, obliquely rounded, with angulate projection on one margin; paramere narrow, tapered from basal $1/4$ to rounded apex; (Fig. 477); siphon slender, long, apex with membranous area, basal capsule with inner arm long, slender, outer arm much shorter than inner arm, widened to apex, basal border emarginate (Figs. 478, 479).

♀ Similar to ♂ except head black. Genitalia with beak of basal unit long, connecting duct short (Fig. 480).

Variation. Length 2.6 to 3.0 mm, width 1.5 to 1.7 mm. Elytral color pattern varies from that described above to having the discal and lateral spots narrowly connected, or with discal and apical spots broadly connected (Fig. 474), and lateral margin narrowly bordered with yellow, connected to subapical spot, or lateral margin yellow, connected to apical spot with discal spot free (Fig. 475).

Geographical distribution: Argentina, Brazil.

Specimens examined: 22. Argentina: Buenos Aires; Buenos Aires, Delta; Buenos Aires, San Fernando; Chaco, Dep. Resistencia; Misiones; Tigre. Brazil: Corumba; Rio de Janeiro (BM) (CMP) (MBR) (USNM).

Remarks. *Hyperaspis longula* is one of the few long, slender, flattened species in South America. It is distinguished by the body shape; short prosternal carinae; sinuate apical margin of the basal abdominal sternum; and nearly complete postcoxal line on basal sternum. See remarks under *H. prolata*.

The lectotype, here designated to stabilize usage of the name, bears the labels "Rep. Argentina, Prov. Buenos Aires, 10-X-1906, C. Bruch/ Typus/ *Hyperaspis longula* Ws."

68. *Hyperaspis prolata* n. sp.

Type material. Holotype ♂: Argentina, Salta, Guemes (MBR). Allotype ♀: Bolivia, Dept. S. Cruz (Santa Cruz), 450 m, Umg Buenavista, Steinback coll., *Hyperaspis* n. sp., Korschefsky Collection 1952 (USNM). Paratypes, 2. Argentina, Chaco, Dep. Resistencia, X-XII-935 J. B. Daguerre 39749; Brazil, Chapada, Acc. No. 2966, Augst. (CMP) (MBR).

Description. ♂, length 2.6 mm, width 1.6 mm; body elongate, slender, nearly parallel sided, flattened. Dorsal surface with head strongly alutaceous, dull; pronotum strongly alutaceous, dull; elytra alutaceous, weakly shiny. Color black except head yellow with black vertex; pronotum yellow with median, black, transverse spot, basal margin of black spot deeply scalloped with slender, median stem extended to margin anterior to scutellum; elytron with yellow lateral border in basal 2/3, border enlarged at apex, 1 round discal spot near suture anterior to middle, 1 slender, comma shaped api-

cal spot at apex (Fig. 481, 482); antenna, mouthparts, legs reddish yellow; propleuron, epipleuron yellow; abdomen with sterna 1-4 dark brown except lateral 1/4 and sterna 5-6 reddish yellow. Head punctures fine, separated by less than to twice a diameter; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures larger than on elytron, sparse medially, dense, contiguous laterally. Punctures on abdominal sterna larger than on elytra, dense medially, becoming fine, dense laterally, sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc alutaceous, coarsely, sparsely punctured. Clypeal apex emarginate. Epipleuron flat, feebly grooved internally, not descending externally, femoral depressions shallow. Antenna with 11 articles (Fig. 483). Protibia widened apically. Prosternum with intercoxal carinae narrowly separated at apex, parallel 5/8 distance to anterior prosternal margin, not convergent, not stemmed, not reaching basal margin. Postcoxal line on 1st abdominal sternum reaching posterior sternal margin, flattened along margin, apex abruptly recurved 3/4 distance to basal sternal margin. Basal margin of 1st abdominal sternum medially sinuate. Fifth sternum with apex broadly, weakly emarginate; 6th sternum truncate. Genitalia with basal lobe as long as paramere, apex truncate, without projection on one margin; paramere wide, tapered from basal 1/2 to rounded apex (Fig. 485); siphon long, slender, apically straight, with apical membranous area, basal capsule with inner arm long, slender, pinched near base, outer arm shorter than inner arm, wide, basal border slightly emarginate (Figs. 486, 487).

♀ Similar to ♂ except vertex of head broadly black, with narrow, median projection extended anteriorly to clypeal apex. Genitalia with beak of basal unit short, wide, with lateral earlike projections (Figs. 488-490)

Variation. Length 2.6 to 2.8 mm, width 1.6 to 1.8 mm. Head of ♂ paratype with black vertex narrowly, medially emarginated with yellow.

Etymology. The specific name is the Latin *prolatus*, meaning elongated, referring to the long, slender body form.

Remarks. *Hyperaspis longula* and *H. prolata* are morphologically similar species sharing several synapomorphies such as flat,

elongate, slender body; parallel prosternal carinae not reaching basal prosternal margin; sinuate apical margin of basal abdominal sternum; and postcoxal line on 1st abdominal sternum abruptly recurved apically, extended nearly to basal sternal margin. They differ from each other in type of male genitalia, and externally by the pronotal color pattern, with *H. prolata* having a central black spot and the posterior border scalloped; *H. longula* having a large, basomedian black spot at basal margin of pronotum.

Genus *Tenuisvalvae* Duverger, **n. stat.**

Hyperaspis (*Tenuisvalvae*) Duverger, 1989: 148.

Type species: *Hyperaspis bisquinquepustulata* (F.) (*H. raynevali* Mulsant), by monotypy.

Description. Hyperaspini with description as for *Hyperaspis* except antenna always with 11 articles (Figs. 493, 497, 501, 509, 516, 524, 531, 538, 545); ultimate maxillary article slightly emarginate apically; mandibulary retinaculum strongly curved, apex rounded; clypeus and frons joined at feeble angle; protibia narrow, not flanged; metendosternite with anterior tendons of fork not curved toward middle (Fig. 546); postcoxal line on 1st abdominal sternum extended to, or nearly to, posterior sternal margin, apex recurved; apex of female abdominal sternum 6 triangular; ♀ genitalia with genital plates extremely long, slender (Fig. 494).

Remarks. DUVERGER (1989) listed a series of differentiating characters for *Hyperaspis* and *Tenuisvalvae* derived from a comparison of *Hyperaspis galliae* Duverger and *Tenuisvalvae raynevalii* Mulsant (*bisquinquepustulata* F.). Some of these characters fail when examples of a variety of species of both genera are examined; characters considered to be of value are used in the above description. No good character for separating males of these two genera has been found. The form of the apical maxillary article may be useful but is extremely difficult to see without dissection, and metendosternite differences are not consistent for the entire fauna. Characters used by Duverger that fail when many species are compared are the shape of the siphonal capsule and form of the postcoxal line. The postcoxal line is said by Duverger to be of the *Parascymnus* Chapin

type. However, examination of the postcoxal line of *T. raynevali* (type species) shows it apically recurved as in *Hyperaspis*, not apically parallel to the hind sternal margin as in *Parascymnus*.

Ten species are recognized as members of this genus.

KEY TO SPECIES OF *TENUISVALVAE*

- 1(2). Elytron red with narrow black border on all margins except sutural margin 10. *gnoma*, n. sp.
 Elytron with pale or dark spots 2
- 2(1). Elytral color primarily black or brown with yellow or orange spots. 3
 Elytral color primarily yellow with black or brown spots 8
- 3(2). Each elytron with 1 spot 4
 Each elytron with 2 or more spots. 5
- 4(3). Elytron with spot at center of disc (Fig. 491)
 1. *unipunctata* (Crotch)
 Elytron with spot at extreme apex (Fig. 495)
 2. *peregrina* (Mulsant)
- 5(3). Elytron with 2 spots, one median and one at apex (Fig. 499) 3. *deyrollei* (Crotch)
 Elytron with 3 or more spots 6
- 6(5). Elytron with 5 spots (Fig. 513) 5. *bisquinquepustulata* (F.)
 Elytron with 3 spots 7
- 7(6). Elytron with one elongate discal spot, one triangular spot laterally at middle and one large, somewhat rounded apical spot (Fig. 426) 8. *caucaensis*, n. sp.
 Elytron with small basoscutellar spot, one humeral spot at base, and an elongate, curved spot at apex (Fig. 543)
 9. *bromelicola* (Sicard)
- 8(2). Elytral suture black; each elytron with black, c-shaped macula extended from center of suture posteriorly to

- apical 1/4, and slender, elongate spot extended from base inside humerus to beyond humeral callus, sometimes connected to median c-shaped mark (Fig. 629)
..... 7. *parenthesis*, n. sp.
- Elytron variably marked but never with c-shaped macula 9
- 9(8). Elytron with 3 discrete black spots (Fig. 506)
..... 4. *notata* (Mulsant)
- Elytron with 2 discrete black spots (Fig. 522)
..... 6. *ecoffeti* (Mulsant)

1. *Tenuisvalvae unipunctata* (Crotch, 1874), n. comb.

Hyperaspis unipunctata Crotch, 1874: 230; KORSCHESKY 1931: 199; BLACKWELDER 1945: 448; GORDON 1987: 20.

Type locality. Santarem (Brazil) (UMZC, holotype, GORDON 1987).

Description. ♀, length 2.3 mm, width 1.4 mm; body form round, convex. Dorsal surface with head alutaceous, dull; pronotum slightly alutaceous, elytron shiny. Color black except pronotum with small, triangular, anterolateral spot nearly reaching basal margin; elytron with large, irregularly rounded, yellow spot just anterior to middle of elytron (Figs. 491, 492); antenna, mouthparts, and legs reddish brown except protibia yellow; propleuron yellow. Head punctures fine, separated by a diameter or less. Pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by a diameter or less. Metasternal punctures larger than on elytron, sparse medially, dense, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex emarginate. Epipleuron oblique, grooved internally, externally descending, femoral excavations deep. Antenna with 11 articles (Fig. 493). Prosternum with intercoxal carinae convergent toward base, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum extended to

posterior sternal margin, flattened along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate. Genitalia with beak of basal unit short, wide, connecting duct short (Fig. 494).

♂ Not known.

Geographical distribution: Brazil, Trinidad.

Specimens examined: 6. Brazil: Santarem. Trinidad: Icacos, St. Augustine. (UMZC) (USNM).

Remarks. In color pattern, *T. unipunctata* closely resembles *Hyperaspis binotata* (Say) and similar species of the eastern United States. The type locality is Amazonian Brazil, but all other specimens examined were from Trinidad, a somewhat unusual combination of localities. However, the type specimen and the Trinidad specimens match in all characters, including identical ♀ genitalia.

2. *Tenuisvalvae peregrina* (Mulsant, 1850), **n. comb.**

Hyperaspis peregrina Mulsant, 1850: 691; CROTCH 1874: 230; KORSCHESKY 1931: 194; BLACKWELDER 1945: 448; GORDON 1987: 29.

Hyperaspis subapicalis Crotch, 1874: 229; KORSCHESKY 1931: 197; BLACKWELDER, 1945: 448; GORDON 1987: 29. (**n. syn.**).

Type locality: of *peregrina*, Brazil (UMZC, lectotype designated by GORDON 1987); of *subapicalis*, Rio de Janeiro, Brazil (UMZC, lectotype designated by GORDON 1987).

Description. ♀, length 3.0 mm, width 2.5 mm; body form round, convex. Dorsal surface with head dull, strongly alutaceous, pronotum slightly less dull than head, elytra feebly shiny. Color black except pronotum with anterolateral 1/4 yellow, inner margin of yellow area rounded; elytron with large, round, subapical yellow spot (Figs. 495, 496); antenna, mouthparts, tibiae and tarsi reddish yellow; propleuron yellow; abdomen black except outer 1/4 and sternum 6 reddish yellow. Head punctures fine, nearly hidden in alutaceous sculpture, separated by less than to 3 times a diameter. Pronotal punctures larger than on head, separated by a diameter or less; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures much larger than on elytron, dense medially, nearly contiguous laterally. Punctures on

abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc strongly alutaceous, finely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, not internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 497). Prosternum with intercoxal carinae tapered toward base, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, slightly flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate. Genitalia with beak of basal unit short, wide; connecting duct short (Fig. 498).

♂. Similar to ♀ except head yellow; pronotum with lateral 1/4 yellow. ♂ genitalia with basal lobe 5/8 length of paramere, apex narrowly, obliquely rounded, with large, rounded projection on one side; paramere wide, tapered to rounded apex in apical 1/2; siphon long, slender, sinuate in apical 1/4, apex with membranous area, basal capsule with inner arm long, slender, outer arm slender, shorter than inner arm, base emarginate.

Variation. None observed.

Geographical distribution: Brazil.

Specimens examined: 3. Brazil. Rio de Janeiro; Rio de Janeiro, Campo Grande. (USNM).

Remarks. *Tenuisvalvae peregrina* is characterized by a single, yellow, subapical spot on each elytron. CROTCH himself (1874) remarked on the similarity between *H. peregrina* and *subapicalis*. After comparing type specimens, we conclude that they represent both sexes of the same species.

The BM collection has two syntypes of *H. subapicalis* that we designate as paralectotypes. The first syntype is labeled "TYPE/ Fry Rio Jano/ *subapicalis*/ Fry Coll. 1905.100./ Type (orange bordered circle)/ *Hyperaspis subapicalis* Crotch Type Brazilia/ Syntype *Hyperaspis subapicalis* Cr. det. R.G. Booth 2004." The second syntype is labeled "TYPE/ Fry Rio Jano/ Fry Coll. 1905.100./ SYNTYPE (blue bordered circle)/ Syntype *Hyperaspis subapicalis* Cr. det. R.G. Booth 2004".

3. *Tenuisvalvae deyrollei* (Crotch, 1874), **n. comb.**

Hyperaspis deyrollei Crotch, 1874: 229; KORSCHESKY 1931: 187; BLACKWELDER 1945: 446; GORDON 1987: 29.

Type locality: Teapa, S. Paulo (São Paulo) (Brazil) (UMZC, lectotype designated by GORDON 1987).

Description. ♂, length 2.5 mm, width 1.9 mm; body form round, convex. Dorsal surface with head dull, strongly alutaceous, pronotum slightly less dull than head, elytra shiny. Color black except head entirely yellow; pronotum mostly reddish yellow with black basomedian macula, lateral margins of macula medially emarginated by pale area; elytron with 2 large, reddish yellow spots, spot on disc raggedly rounded, apical spot transverse (Fig. 499, 500); antenna, mouthparts, legs yellow; propleuron yellow; abdomen reddish yellow except median 1/2 of sterna 1-3 dark brown. Head punctures fine, nearly hidden in alutaceous sculpture, separated by less than to twice a diameter. Pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures much larger than on elytron, sparse medially, dense laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc slightly shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique deeply grooved internally, descending externally femoral excavations deep. Antenna with 11 articles (Fig. 501). Prosternum with intercoxal carinae convergent, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, slightly flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum broadly, feebly emarginate. Genitalia with basal lobe 3/4 length of paramere, with large projection on one side, paramere wide, feebly tapered to rounded apex (Fig. 502); siphon slender, apex curved upward with internal membranous area, basal capsule with inner arm broad, short, outer arm short (Figs. 503, 504).

♀ Similar to ♂ except head black; pronotum with median black area extended nearly to apex. Genitalia with beak of basal unit short; connecting duct long (Fig. 505).

Variation. Length 2.3 to 2.7 mm, width 1.8 to 2.1 mm. Median dark area on pronotum varies slightly in size; color of dorsal maculation varies from very dark reddish yellow to yellow and the lectotype has a red discal spot.

Geographical distribution: Southeastern South America.

Specimens examined: 110. Argentina: Bella Vista; Buenos Aires; Burzaco Sur; Corrientes; Delta; Entre Rios; Haedo; Loreto; Misio-
nes; Rio Chama; Corrientes, Santo Tomé; Salto; Tigre. Uruguay: Montevideo (CCM) (MBR) USNM).

R e m a r k s . *Tenuisvalvae deyrollei* is frequently collected in Argentina where it is often found in collections under the name "*Hyperaspis muhni* Brèthes". This is apparently a manuscript name, as no published record of it can be located. The 2 elytral spots and mostly reddish yellow pronotum distinguish this species.

4. *Tenuisvalvae notata* (Mulsant, 1850), **n. comb.**

Cleothera notata Mulsant, 1850: 550.

Hyperaspis notata: CROTCH 1874: 227; KORSCHESKY 1931: 192; BLACKWELDER 1945: 447; GORDON 1987: 29.

Type locality: Brazil (UMZC, lectotype designated by GORDON 1987).

D e s c r i p t i o n . ♂, length 3.2 mm, width 2.6 mm; body form broadly round, convex. Dorsal surface slightly shiny, alutaceous. Color yellow except pronotum with 3 black maculae, 1 narrow, irregular basomedian macula, and 2 triangular median maculae; elytron with 4 spots and sutural margin black, 1 oval, discal spot on suture, 1 oval spot anterior to and laterad of discal spot, 1 comma shaped spot medially near lateral margin, 1 irregularly oblong spot on apical declivity, sutural margin narrowly black anterior to discal spot, and widely black posterior to discal spot; scutellum black (Fig. 506); pro-, meso-, and metasterna black; median area of basal 3 abdominal sterna dark brown. Head punctures fine, nearly hidden in alutaceous sculpture, separated by less than to 3 times a diameter. Pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures

fine, sparse medially, becoming much larger than on elytron, dense laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, finely, indistinctly punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, not internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 509). Prosternum with intercoxal carinae convergent medially, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 2/3 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum broadly, feebly emarginate. Genitalia with basal lobe as long as paramere, slender, with feeble lateral projection on one side, paramere wide, feebly tapered to rounded apex (Figs. 507, 508); siphon slender, straight, apex with internal membranous area, basal capsule with inner arm slender, short, outer arm wide, longer than inner arm (Figs. 510, 511).

♀ Similar to ♂ except head with triangular black spot on each side of vertex. Genitalia with beak of basal unit short; connecting duct short (Fig. 512).

Variation. Length 3.0 to 3.4 mm, width 2.4 to 2.7 mm. Pronotal maculae vary somewhat in size; most Colombian specimens have the median spots fused with basomedian macula; elytral spots vary slightly in size, but remain quite constant in shape.

Geographical distribution: Central and northern South America.

Specimens examined: 36. Bolivia: Loma Alta. Brazil: Bahia; Rio de Janeiro, Campo Grande; Corumba; Sta. Lucia; São Paulo, Campinas. Colombia: Valle del Cauca, Pto. Tejada; Antioquia, Rio Negro (BM) (CMNH) (USNM).

Remarks. Pronota and elytra with yellow backgrounds and black maculation occur frequently in species of Hyperaspidini and especially Brachiacanthini. Spot patterns are repeated in several generic taxa, creating a confusing situation. *Tenuisvalvae* has 3 species with this type of pattern, *T. parenthesis*, *T. notata*, and *T. ecoffeti*. The last-named species lacks a distinct discal spot on the elytron and the pronotum is mostly black with wide, lateral yellow areas. *Tenuisvalvae parenthesis* has a c-shaped vitta on each elytron.

5. *Tenuisvalvae bisquinquepustulata* (Fabricius, 1801), **n. comb.**

Coccinella bisquinquepustulata Fabricius, 1801: 384.

Cleothera bisquinquepustulata: MULSANT 1850: 610.

Hyperaspis bisquinquepustulata: CROTCH 1874: 221; KORSCHESKY 1931: 185; BLACKWELDER 1945: 446.

Cleothera raynevalii Mulsant, 1853: 85. (**n. syn.**).

Hyperaspis raynevalii: CROTCH 1874; KORSCHESKY 1931: 195; BLACKWELDER 1945: 448; GORDON 1987: 29.

Hyperaspis (Tenuisvalvae) raynevalii: DUVERGER 1989: 148.

Hyperaspis longicoxitis Nutting, 1980: 260. (**n. syn.**).

Hyperaspis (Tenuisvalvae) raynevalii longicoxitis: DUVERGER 1989: 152.

Type locality: of *bisquinquepustulata*, "in America meridionali" (ZMUC, lectotype here designated); of *raynevalii*, Cayenne (French Guiana) (UMZC, lectotype designated by GORDON 1987); of *longicoxitis*, California, San Diego Co., Jacumba (CAS, holotype).

Description. ♂, length 3.2 mm, width 2.6 mm; body form broadly round, convex. Dorsal surface with head dull, strongly alutaceous, pronotum and elytra shiny. Color black except head entirely yellow; pronotum mostly yellow with large, black, basomedian spot, spot not extended to anterior pronotal margin, anterior margin of spot slightly emarginate; elytron with 5 yellow spots, spot laterad of scutellum and discal spot round, humeral spot apically tapered, spot at middle of lateral margin elongate, apical spot transverse (Fig. 513, 514); antenna, mouthparts, legs reddish yellow; propleuron and epipleuron yellow; abdomen reddish yellow except median 2/3 of sterna 1-5 dark brown. Head punctures distinct, visible in alutaceous sculpture, separated by less than to twice a diameter. Pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures fine, sparse medially, becoming much larger, dense laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc slightly shiny, punctures coarse, separated by a diameter. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 516). Prosternum with intercoxal carinae convergent, basally stemmed, reaching basal margin. Postcoxal line

on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum broadly, feebly emarginate. Genitalia with basal lobe 3/4 length of paramere, apex rounded, with large projection on one side, paramere wide, feebly tapered to rounded apex (Fig. 517); siphon slender, apex sinuate with internal membranous area, basal capsule with inner arm slender, elongate, outer arm wide, elongate (Figs. 518, 519).

♀ Similar to male except pronotum with median black area extended to apex. Genitalia with beak of basal unit short; connecting duct short (Figs. 520, 521).

Variation. Length 2.7 to 3.2 mm, width 2.3 to 2.6 mm. In the typical form described above the ground color is black, the size of the pronotal dark area varies slightly; the scutellar and discal spots are often narrowly connected, and the 3 lateral spots may be narrowly or broadly connected. The *T. longicoxitis* form has the ground color brown, median pronotal spot brown, reduced in size, and often M-shaped (Fig. 515).

Geographical distribution: Central and northern South America, some Caribbean islands, and Central America. Introduced to Africa.

Specimens examined: 37. Brazil: Mato Grosso, Chapada; Pará: Belem, Cachimbo; Santarem; Sta. Lucia; Pará, Curraliño. Ecuador. Napo, Pompeya. Guyana. Hope. Peru: Tingo Maria. Surinam. (No locality). Trinidad: St. Augustine; Tunapuna. Bolivia: Guanay. (BM) (CCM) (CDA) (CMP) (CNC) (CMNH) (MSNG) (USNM) (ZMHB).

Remarks. This is a widespread, frequently collected species that has been the object of biological control research under the name *H. raynevalii*. As a result, it was introduced into the United States (southern California) and to central Africa (Brazzaville, Congo Republic).

The type specimen of *Coccinella bisquinquepustulata* F. proved to be synonymous with the type of *T. raynevalii*; thus, the latter name is a junior synonym of the former.

DUVERGER (1989) placed *Hyperaspis longicoxitis* in his subgenus *Tenuisvalvae* and, at the same time, reduced the status of *T. longicoxitis* to subspecies. He also described a new subspecies, *T. raynevalii brazzavillensis*, for specimens from Brazzaville.

We consider *T. longicoxitis* a synonym of *T. bisquinquepustulata* because the only distinguishing characters are in coloration. The former name was applied to specimens from Trinidad and certain Caribbean islands that have a brown dorsal ground color instead of black, and the basomedian pronotal spot reduced and often M-shaped. We have seen examples from Pará, Brasil, that are essentially identical in color to Caribbean specimens, thus making color differences useless as distinguishing characters.

Two syntypes of *Coccinella bisquinquepustulata* in the ZMUC were examined. The lectotype, designated here to stabilize future usage of the name, is labeled "Type (red label)/ *C. bisquinquepustulata*, Autata, ex. Am. mer. Schonh." (handwritten). The paralectotype designated here is labeled "Type" (red label).

6. *Tenuisvalvae ecoffeti* (Mulsant, 1853), **n. comb.**

Hyperaspis ecoffeti Mulsant, 1853: 99; CROTCH 1874: 226; KORSCHESKY 1931: 187; BLACKWELDER 1945: 447; GORDON 1987: 28.

Hyperaspis quadrina Mulsant, 1853: 100; KORSCHESKY 1931: 187 (as a synonym of *H. ecoffeti*).

Type locality: of *ecoffeti*, Brazil (UMZC, lectotype designated by GORDON 1987); of *quadrina*, Sainte (sic !) Catherine, Brazil (BM, lectotype here designated).

Description. ♂, length 2.7 mm, width 2.0 mm; body form oval, convex. Head alutaceous, dull; pronotum slightly alutaceous, shiny; elytra polished, shiny. Color yellow except pronotum black with lateral and anterior borders yellow; elytron with 2 spots and sutural margin black, 1 irregularly rectangular spot medially in apical 1/2, 1 irregularly round spot medially in posterior 1/2, sutural margin with broad, black vitta extended from just posterior to scutellum nearly to apex, vitta slightly widened in apical 1/4, narrowed nearly to apex then curved outward, lateral and apical margins of elytron narrowly black; scutellum black (Fig. 522); pro-, meso-, and metasterna black; median area of basal 4 abdominal sterna dark brown. Head punctures fine, distinct, separated by less than to twice a diameter. Pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by less than to 3 times a diam-

eter. Metasternal punctures coarse, larger than on elytron, separated by a diameter medially, becoming contiguous laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, densely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 524). Prosternum with intercoxal carinae convergent, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, slightly flattened along margin, apex recurved 1/2 distance to basal sternal margin. Fifth sternum with apex broadly, deeply emarginate; 6th sternum broadly, feebly emarginate. Genitalia with basal lobe more than 3/4 length of paramere, wide, with strong lateral projection on one side, paramere wide, feebly tapered to rounded apex (Fig. 525); siphon slender, apex slightly bent downward, with membranous area, basal capsule with inner arm slender, short, outer arm wide, longer than inner arm (Figs. 526, 527).

♀ Similar to ♂ except head black with median reddish yellow, apically triangular area. Genitalia with beak of basal unit long; connecting duct long (Fig. 528).

Variation. Length 2.6 to 2.7 mm, width 2.2 to 2.3 mm. Pronotal macula varies significantly from occupying median 1/2 of pronotum to occupying most of pronotum with only narrow lateral and anterior margins yellow; elytral spots vary slightly in size, sutural vitta varies noticeably in width and shape from the typical to straight from apex to base (*quadrina*) (Fig. 523).

Geographical distribution: Argentina, Brazil, Paraguay.

Specimens examined: 32. Argentina: Loreto, Misiones. Brazil: Nova Teutonia; São Paulo, Cantareira, Campinas; Santa Catarina, Florianópolis. Paraguay: Hohenau, Alto-Paraná (BM) (USNM) (ZMHB).

Remarks. This species resembles only *T. notata* in color pattern. It is distinguished by the single black pronotal macula, lack of discal spot on the elytron, and 2 spots on each elytron.

CROTCH (1874) correctly considered *Hyperaspis quadrina* a junior synonym of *T. ecoffeti*. The type specimen of *T. quadrina*

was from the Deyrolle collection, according to MULSANT (1853), but was not found in the UMZC. However, the Natural History Museum, London, collection has a single specimen of *T. quadrina*, labeled as a type that bears the correct locality label recorded by Mulsant. We consider that specimen, labeled "S. Cathar (green paper)/ 261/880.23/ Type (orange bordered disc/ *Hyperaspis quadrina*, M. Brasil (blue paper)," to be the lectotype of *H. quadrina* and so designate it to stabilize future usage of the name. KIRSCH (1876) described "*Hyperaspis Ecoffeti* var. *fraudulenta*," a combination repeated by KORSCHESKY (1931) and BLACKWELDER (1945). Examination of the *H. fraudulenta* type specimen (SMTD) revealed that it is actually a valid species of *Cyra* (Brachiacanthini).

7. *Tenuisvalvae parenthesis* n. sp.

Type material: Holotype ♀: Kolumb (Colombia), Cundinamarca, Monterredondo, 1961, 1400 m, leg. Schneble (USNM). Paratypes, 5. 1, same data as holotype; 1, Colombia, Boy. (Boyaca), Guayata, 18.X.40, altitude 1720 m, Murillo No 5299 (USNM). 1, Venezuela, E.do Merida, La Trampa, Lagunillas 1700 m, 10.KKK.778, leg Bordon; 2, Venezuela, Timotes, m 2200, (Edo. Merida), 23-I-1968, leg. Bordón (CCM) (MSNG) (USNM).

Description. ♀, length 3.5 mm, width 2.8 mm; body form round, convex. Dorsal surface shiny except head dull, strongly alutaceous, pronotum shiny, slightly alutaceous. Color yellow except head with borders black, black border on vertex medially emarginated with yellow; pronotum with basal border narrowly black, 2 curved projections extended from basal border to apex; elytron with short, apically knobbed vitta extended from base past humeral callus, suture narrowly black with parenthesis shaped, apically knobbed vitta extended out at middle, curved posteriorly onto apical declivity, small, triangular spot near lateral margin in posterior 1/2 (Figs. 529, 530); mouthparts dark brown; venter of head, pro-, meso-, metasterna, femora (except apices), and median area of abdominal sterna 1-5 black. Head punctures fine, nearly hidden in alutaceous sculpture, separated by 1 to 2 times a diameter. Pronotal punctures larger than on head, separated by less than to 2 times a diameter; Elytral punctures larger than pronotal punctures, separated by 1 to

2 times a diameter. Metasternal punctures larger than on elytron, separated by a diameter medially, dense, nearly contiguous laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Antenna with 11 articles (Fig. 531). Prosternum with intercoxal carinae tapered toward base, stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, slightly flattened along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate. Genitalia with beak of basal unit short, connecting duct short (Fig. 535).

♂ Similar to ♀ except ♂ genitalia with basal lobe 5/8 length of paramere, abruptly tapered to narrow apex in apical 1/2, with large, acute projection on one side; paramere wide, tapered to rounded apex in apical 1/2 (Fig. 532); siphon long, slender, sinuate in apical 1/4, apex with membranous area, basal capsule with inner arm elongate, slender, outer arm slender, shorter than inner arm, base emarginate (Figs. 533, 534).

Variation. Length 3.2 to 3.5 mm, width 2.5 to 2.8 mm. Elytron with triangular lateral spot sometimes connected to parenthetical vitta; apex of parenthetical vitta may be narrowly separate from main stem.

Etymology. The species is named for the curved elytral vitta reminiscent of a parenthesis.

R e m a r k s . *Tenuisvalvae parenthesis* bears some resemblance to *T. caucaensis*, but the dorsal color pattern is thus far unique within the genus.

8. *Tenuisvalvae caucaensis* n. sp.

Type material: Holotype ♂: Colombia, Cauca, 15 mi. E. Silvia, 11,000', July 16, 1970, H. & A. Howden (USNM). Allotype ♀: Colombia, Cauca, 12 mi. E. Silvia, 11,000, July 15, 1970, H. & A. Howden (USNM).

Description. ♂, length 3.0 mm, width 2.6 mm; body form rounded, widest behind middle of elytra, convex. Head and pronotum slightly alutaceous, weakly shiny; elytra polished. Color black except head with apical 3/4 yellow; pronotum with lateral 1/3 yellow, yellow area with curved inner margin; elytron with 3 large, spots, discal spot elongate, sublateral spot oval with anteromedian angle truncate, subapical spot more or less round (Figs. 536, 537); antenna, propleuron yellow; tarsi reddish brown. Head punctures distinct, separated by a diameter or less. Pronotal punctures as large as head punctures, separated by 1 to 2 times a diameter; Elytral punctures larger than pronotal punctures, separated by 1 to 2 times diameter. Metasternal punctures larger than on elytra, dense, absent medially, separated by a diameter laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc slightly alutaceous, coarsely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Antenna with 11 articles (Fig. 538). Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Prosternum with intercoxal carinae tapered to base, not stemmed. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, not flattened along margin, apex recurved 2/3 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate; 6th sternum broadly, distinctly emarginate. Genitalia with basal lobe 3/4 length of paramere, abruptly narrowed apically with large lateral projection, paramere nearly parallel sided, apex broadly rounded, trabes dark brown (Fig. 539); siphon slender, apex straight with membranous area, capsule dark brown with inner arm large, long, outer arm large, wide (Figs. 540, 541).

♀ Similar to ♂ except head black. Genitalia with beak of basal unit large, wide, connecting duct short (Fig. 542).

Variation. None observed.

Etymology. The species is named for the Department of Cauca where the type specimens were collected.

Remarks. This species is differentiated from other *Tenuisvalvae* species by the 3 very large, yellow elytral spots, and broad, posteriorly widened body. The dark brown genital trabes and siphonal capsule are also worth noting because these structures are nearly always yellow or at least pale in hyperaspine taxa.

9. *Tenuisvalvae bromelicola* (Sicard, 1925), **n. comb.**

Cleothera bromelicola Sicard, 1925: 81.

Hyperaspis bromelicola: KORSCHESKY 1931: 185; BLACKWELDER 1945: 446.

Hyperaspis (Tenuisvalvae) bromelicola: PECK 2005: 202.

Type locality: Panama, Canal Zone (BM, lectotype here designated).

Description. ♂, length 2.7 mm, width 2.3 mm; body form round, convex. Dorsal surface with head dull, strongly alutaceous, pronotum shiny slightly alutaceous, elytra shiny. Color black except head entirely yellow; pronotum mostly yellow with black basomedian macula, anterior margin of macula with 2 lateral projections; elytron with 3 yellow spots, spot on base laterad of scutellum triangular, basal humeral spot somewhat triangular, apical spot long, curved along outer elytral margin from near suture to midpoint of elytron (Figs. 543, 544); antenna, mouthparts, propleuron, legs yellow; abdomen reddish yellow except median 1/2 of sterna 1-3 dark brown. Head punctures fine, nearly hidden in alutaceous sculpture, separated by less than to twice a diameter. Pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures larger than pronotal punctures, separated by 1 to 2 times a diameter. Metasternal punctures much larger than on elytron, sparse medially, dense laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside postcoxal arc shiny, finely, sparsely punctured. Clypeal apex deeply emarginate, clypeus and frons joined at abrupt angle. Antenna with 11 articles (Fig. 545). Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Prosternum with intercoxal carinae convergent, basally stemmed, reaching basal margin. Postcoxal line on 1st abdominal sternum extended to posterior sternal margin, flattened along margin, apex recurved 1/3 distance to basal sternal margin. Fifth sternum with apex broadly, feebly emarginate; 6th sternum broadly, feebly emarginate. Genitalia with basal lobe slightly shorter than paramere, with barely perceptible projection on one side, paramere wide, feebly tapered to rounded apex (Fig. 547); siphon slender, apex curved, sinuate with membranous area, basal capsule with inner arm broad, short, outer arm broad, short (Figs. 548, 549).

♀ Similar to ♂ except head with vertex black on each side; pronotum with median black area extended to apex, apex of black area medially emarginated with clear, V-shaped area exposing median yellow area of head vertex. Genitalia with beak of basal unit short, large; connecting duct short (Figs. 550, 551).

Variation. Length 2.6 to 3.1 mm, width 2.2 to 2.6 mm. Elytral maculation may have the humeral spot reduced to a small, reddish brown area, the apical spot may be expanded to cover entire apical declivity, or elongated along elytral margin nearly to humeral spot.

Geographical distribution: Colombia, Ecuador, Panama.

Specimens examined: 26. Colombia: Chocó, Istmina. Ecuador: El Oro, Machala; Santo Domingo de los Colorados. Galapagos Islands, San Cristobal. Panama: Canal Zone, Ancon. (BM) (CCM) (USNM).

R e m a r k s . *Tenuisvalvae bromelicola* is the only known species of the genus found in both South and Central America. The distinctive color pattern should not be confused with that of any currently known species of *Tenuisvalvae*. The Natural History Museum, London, has three type specimens of this species, the first of which is designated as the lectotype to stabilize future usage of this name. It is labeled "Type (orange bordered disc)/ Panama Canal Zone VII-1914/ Pres. by Imp. Bur. Ent. Brit. Mus. 1924-482/ Larvae are predaceous on *Pseudococcus bromeliae*/ D.T. Fullaway Collector/ *Cleothera bromelicola* Sic., type n. sp. (handwritten in purple ink)". The other two syntypes, designated as paralectotypes, are labeled as is the lectotype, except one is without a circular disc with a type or syntype designation, and the other has a blue bordered disc labeled "Syntype".

10. *Tenuisvalvae gnoma* n. sp.

Type material: Holotype ♀: Col. (Colombia), S.A., Apr. 22-35, From H. Daniel, Chapin 42-31 (USNM).

D e s c r i p t i o n . ♀, length 3.0 mm, width 2.3 mm; body form rounded, convex. Dorsal surface shiny with head alutaceous, feebly shiny; pronotum alutaceous, feebly shiny, elytron shiny. Color black except head with u-shaped yellow spot; pronotum with lateral 1/3 yellow; elytron pale red, narrowly bordered with black

except sutural margin, basal border narrowly extended onto humeral callus, apical border broad (Fig. 552); mouthparts dark brown; antenna, protibia yellow; epipleuron red; abdomen with lateral 1/4 yellow. Head punctures fine, separated by a diameter or less. Pronotal punctures larger than on head, separated by a diameter or less; Elytral punctures larger than pronotal punctures, separated by less than to twice a diameter. Metasternal punctures larger than on elytron, separated by less than to 3 times a diameter medially, dense, contiguous laterally. Punctures on abdominal sterna 1-4 coarse, sparse medially, becoming dense, very fine laterally; sterna 5-6 finely densely punctured throughout; area on 1st abdominal sternum inside post-coxal arc shiny, coarsely, sparsely punctured. Clypeal apex emarginate, clypeus and frons joined at abrupt angle. Epipleuron oblique, internally grooved, descending externally, femoral excavations deep. Prosternum with intercoxal carinae widely separated apically, gradually tapered toward base, reaching basal margin, not stemmed. Post-coxal line on 1st abdominal sternum extended to posterior sternal margin, slightly flattened along margin, apex recurved 3/8 distance to basal sternal margin. Fifth sternum with apex broadly, distinctly emarginate. Genitalia with beak of basal unit short, connecting duct short (Fig. 553).

♂ Not known.

Etymology. The species name is the Latin *gnoma*, meaning dwarf, referring to the small size.

Remarks. *Tenuisvalvae gnoma* is the only known species of *Tenuisvalvae* with mostly red elytra.

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ABSTRACT

South American Hyperaspini include 8 genera and 97 species. Genera are *Diazonema* Mulsant, *Menoscelis* Mulsant, *Thalassa* Mulsant, *Clypeaspis*, n. gen., *Prognataspis*, n. gen., *Peruaspis*, n. gen., *Hyperaspis* Redtenbacher, and *Temisvalvae* Duverger. The genera *Gordoni* Duverger and *Aliana* Duverger are placed as junior synonyms of *Hyperaspis*. In *Diazonema* 7 species are recognized as valid, including 3 new species: *boothi*, *murilloi*, and *eccentrica*. *Clypeaspis* is erected for *Hyperaspis trilineata* Mulsant. *Prognataspis* contains a single new species, *P. surreptiva*. *Peruaspis* is erected for the new species *P. paprzyckii* and *P. hypocrita*. Forty-one new species of *Hyperaspis* are described: *H. abertha*, *H. aemulata*, *H. apicaspis*, *H. arida*, *H. atra*, *H. ayacucho*, *H. bisignata*, *H. brethesi*, *H. camargoi*, *H. campbelli*, *H. chapini*, *H. chocoi*, *H. circumclusa*, *H. colombiensis*, *H. cracentis*, *H. dispar*, *H. dissidens*, *H. helveola*, *H. herrerae*, *H. howdeni*, *H. imitatrix*, *H. istmina*, *H. joannae*, *H. laterimacula*, *H. latitibia*, *H. lindae*, *H. mariposa*, *H. mimica*, *H. octonotata*, *H. orthivora*, *H. prolata*, *H. pseudodonzeli*, *H. pseudopavida*, *H. rosariensis*, *H. satipoensis*, *H. siladesma*, *H. simlaensis*, *H. tayronensis*, *H. uninotata*, *H. vredenburgi*, and *H. zomula*. *Temisvalvae* is recognized as a valid genus instead of a subgenus of *Hyperaspis*, and 3 new species are described: *T. caucaensis*, *T. gnoma* and *T. parenthesis*.

The following new synonyms are stated (in each couplet the second name is the valid one): *Hyperaspis cordifera* (Weise) = *H. matronata* Mulsant, *H. incompleta* Crotch = *H. scutifera* Mulsant, *H. insignis* Crotch = *H. operaria* (Mulsant), *H. communalis* Brèthes = *H. operaria* (Mulsant), *H. graphica* Weise = *H. eupaleoides* Crotch, *H. juniapuca* Brèthes = *H. festiva* Mulsant, *H. flavolineata* Mader = *H. conclusa* Weise, *H. subapicalis* Crotch = *Temisvalvae peregrina* (Mulsant), *H. raynevalii* (Mulsant) = *Temisvalvae bisquinquepustulata* (F.), and *H. longicoxitis* Nutting = *Temisvalvae bisquinquepustulata* (F.).

New combinations from *Hyperaspis* are: *T. unipunctata* (Crotch), *T. peregrina* (Mulsant), *T. deyrollei* (Crotch), *T. notata* (Mulsant), *T. ecoffeti* (Mulsant), *T. bromelicola* (Sicard), and *T. bisquinquepustulata* (F.).

Cleothera micilla Mulsant is transferred to *Diomus* Mulsant and placed as a synonym of *Diomus pallidipennis* (Mulsant).

RIASSUNTO

Coccinellidi del Sud America (Coleoptera). Parte XI: revisione sistematica degli Hyperaspidini (Hyperaspidinae).

La Tribù Hyperaspidini comprende in Sud America 8 generi e 97 specie. I generi sono: *Diazonema* Mulsant, *Menoscelis* Mulsant, *Thalassa* Mulsant, *Clypeaspis*, n. gen., *Prognataspis*, n. gen., *Peruaspis*, n. gen., *Hyperaspis* Redtenbacher e *Tenuisvalvae* Duverger. I generi *Gordoni* Duverger e *Aliana* Duverger sono considerati nuovi sinonimi di *Hyperaspis*. In *Diazonema* sono riconosciute 7 specie valide, incluse 3 nuove specie: *boothi*, *murilloi* ed *eccentrica*. Per *Hyperaspis trilineata* Mulsant viene eretto il nuovo genere *Clypeaspis*. *Prognataspis* contiene una sola nuova specie, *P. surreptiva*. Il genere *Peruaspis* viene istituito per *P. paprzyckii* e *P. hypocrita*. Vengono descritte quarantuno nuove specie di *Hyperaspis*: *H. abertha*, *H. aemulata*, *H. apicaspis*, *H. arida*, *H. atra*, *H. ayacucho*, *H. bisignata*, *H. brethesi*, *H. camargoi*, *H. campbelli*, *H. chapini*, *H. chocoi*, *H. circumclusa*, *H. colombiensis*, *H. cracentis*, *H. dispar*, *H. dissidens*, *H. helveola*, *H. herrerae*, *H. howdeni*, *H. imitatrix*, *H. istmina*, *H. joannae*, *H. laterimacula*, *H. latitibia*, *H. lindae*, *H. mariposa*, *H. mimica*, *H. octonotata*, *H. orthivora*, *H. prolata*, *H. pseudodonzeli*, *H. pseudopavida*, *H. rosariensis*, *H. satipoensis*, *H. siladesma*, *H. simlaensis*, *H. tayronensis*, *H. uninotata*, *H. vredenburgi* e *H. zonula*. *Tenuisvalvae* viene riconosciuto come genere valido invece di sottogenere di *Hyperaspis* e vengono descritte 3 nuove specie: *T. caucaensis*, *T. gnoma* e *T. parenthesis*.

Vengono stabilite alcune nuove sinonimie (la specie valida è la seconda di ogni coppia): *Hyperaspis cordifera* (Weise) = *H. matronata* Mulsant, *H. incompleta* Crotch = *H. scutifera* Mulsant, *H. insignis* Crotch = *H. operaria* (Mulsant), *H. communalis* Brèthes = *H. operaria* (Mulsant), *H. graphica* Weise = *H. eupaleoides* Crotch, *H. juniapuca* Brèthes = *H. festiva* Mulsant, *H. flavolineata* Mader = *H. conclusa* Weise, *H. subapicalis* Crotch = *Tenuisvalvae peregrina* (Mulsant), *H. raynevalii* (Mulsant) = *Tenuisvalvae bisquinquepustulata* (F.) e *H. longicoxitis* Nutting = *Tenuisvalvae bisquinquepustulata* (F.).

Le specie trasferite da *Hyperaspis* a *Tenuisvalvae* sono: *T. unipunctata* (Crotch), *T. peregrina* (Mulsant), *T. deyrollei* (Crotch), *T. notata* (Mulsant), *T. ecoffeti* (Mulsant), *T. bromelicola* (Sicard) e *T. bisquinquepustulata* (F.).

Cleothera micilla Mulsant è trasferita in *Diomus* Mulsant e considerata sinonimo di *Diomus pallidipennis* (Mulsant).

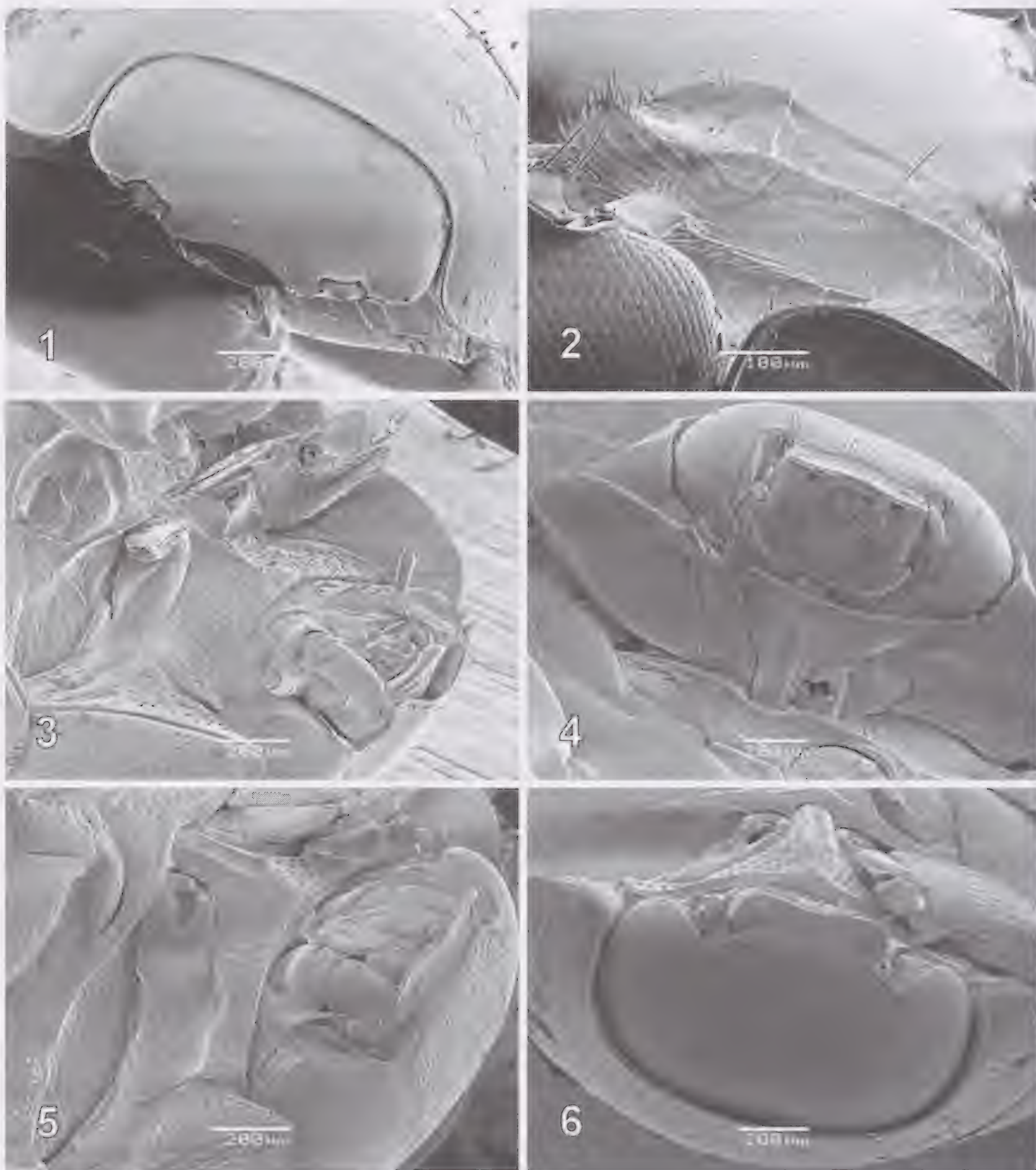
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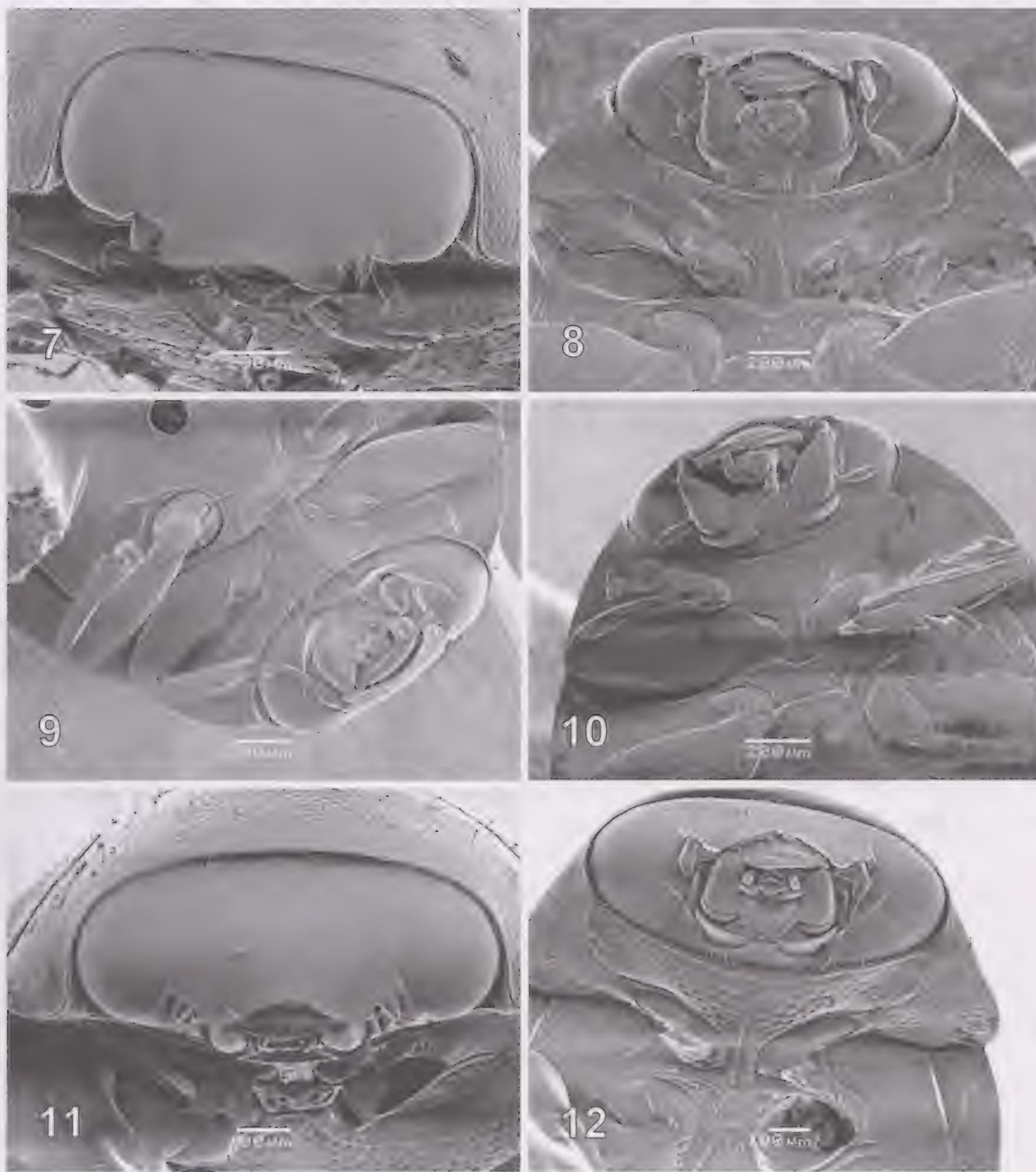
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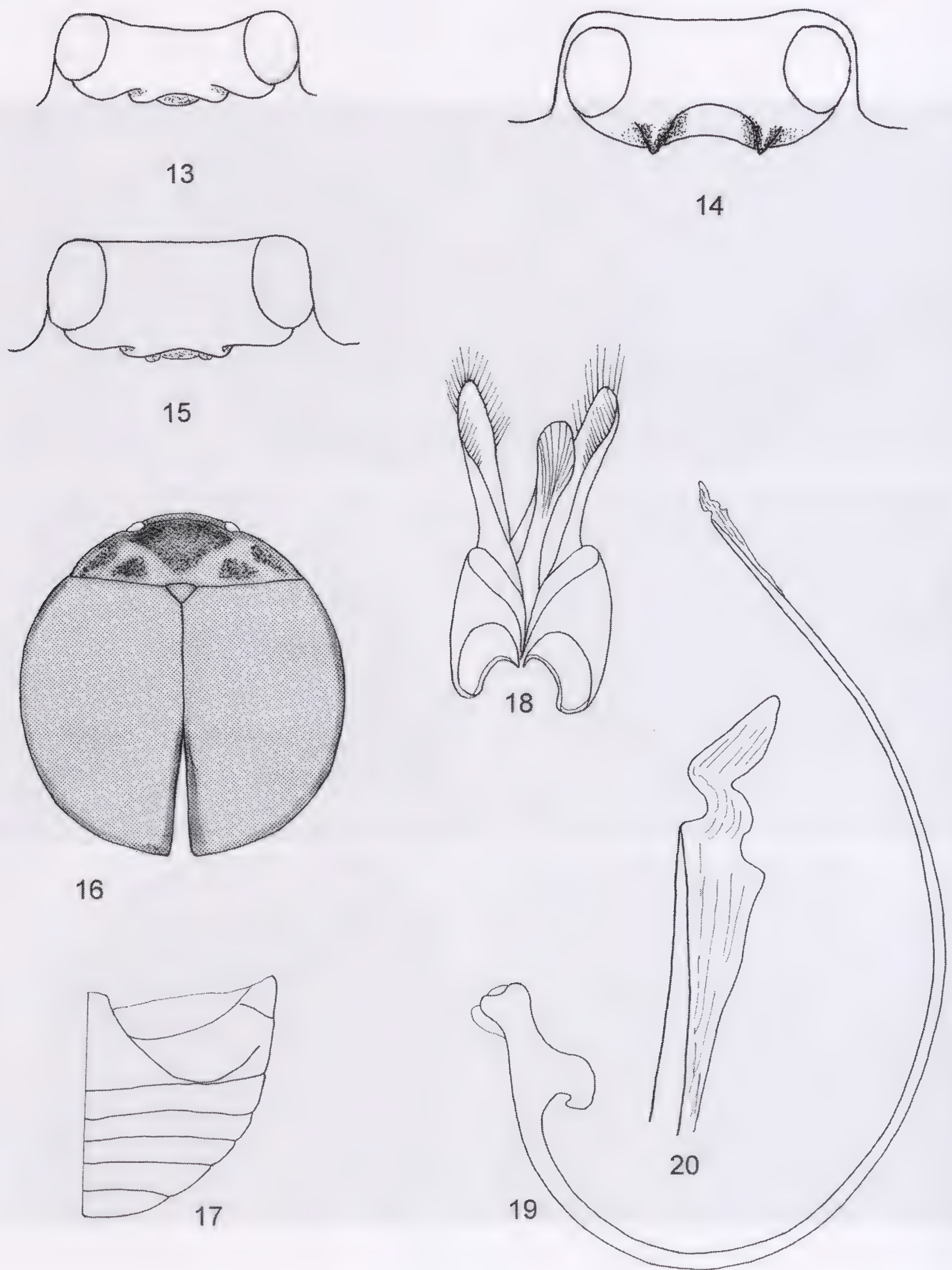
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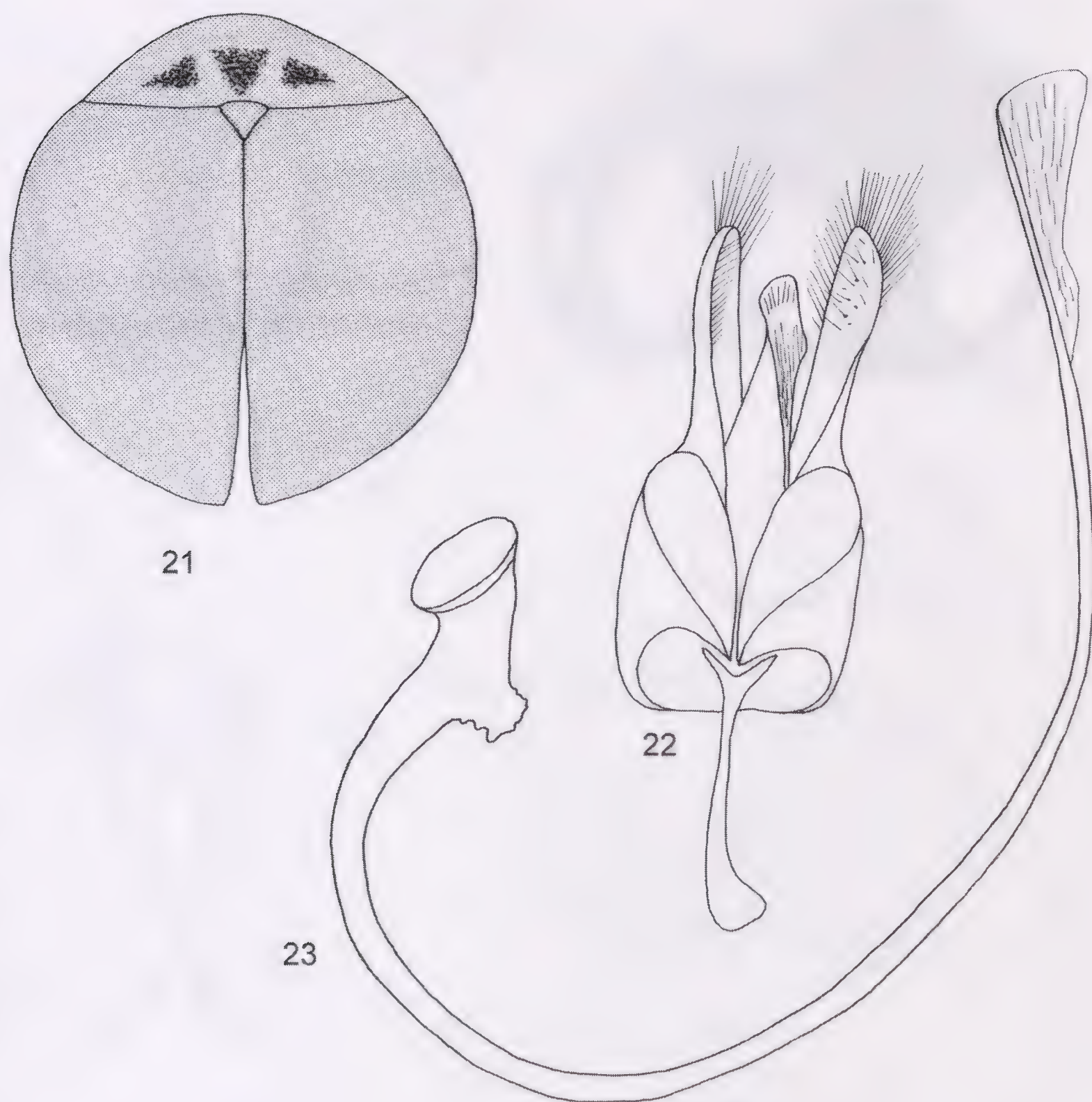
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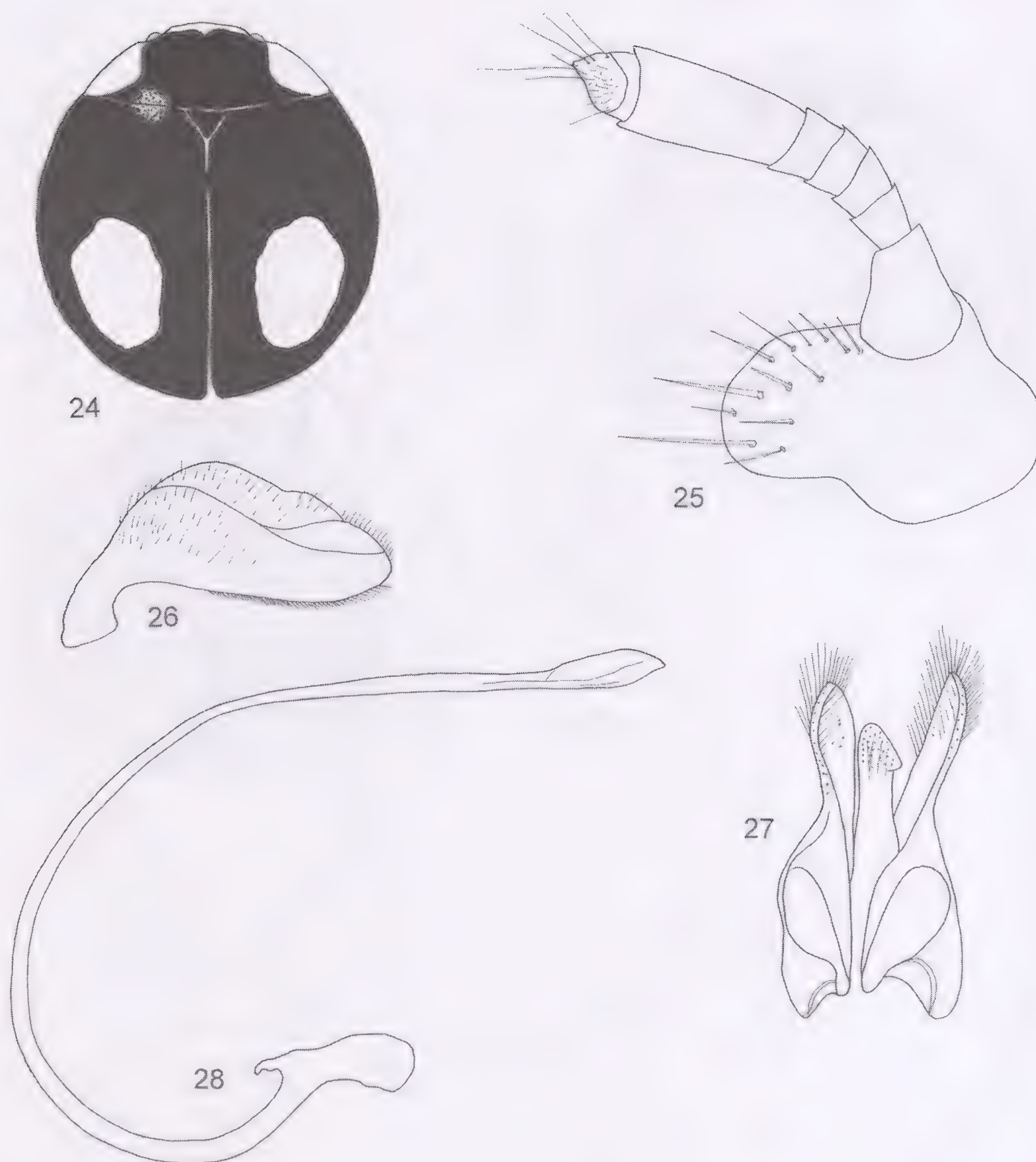
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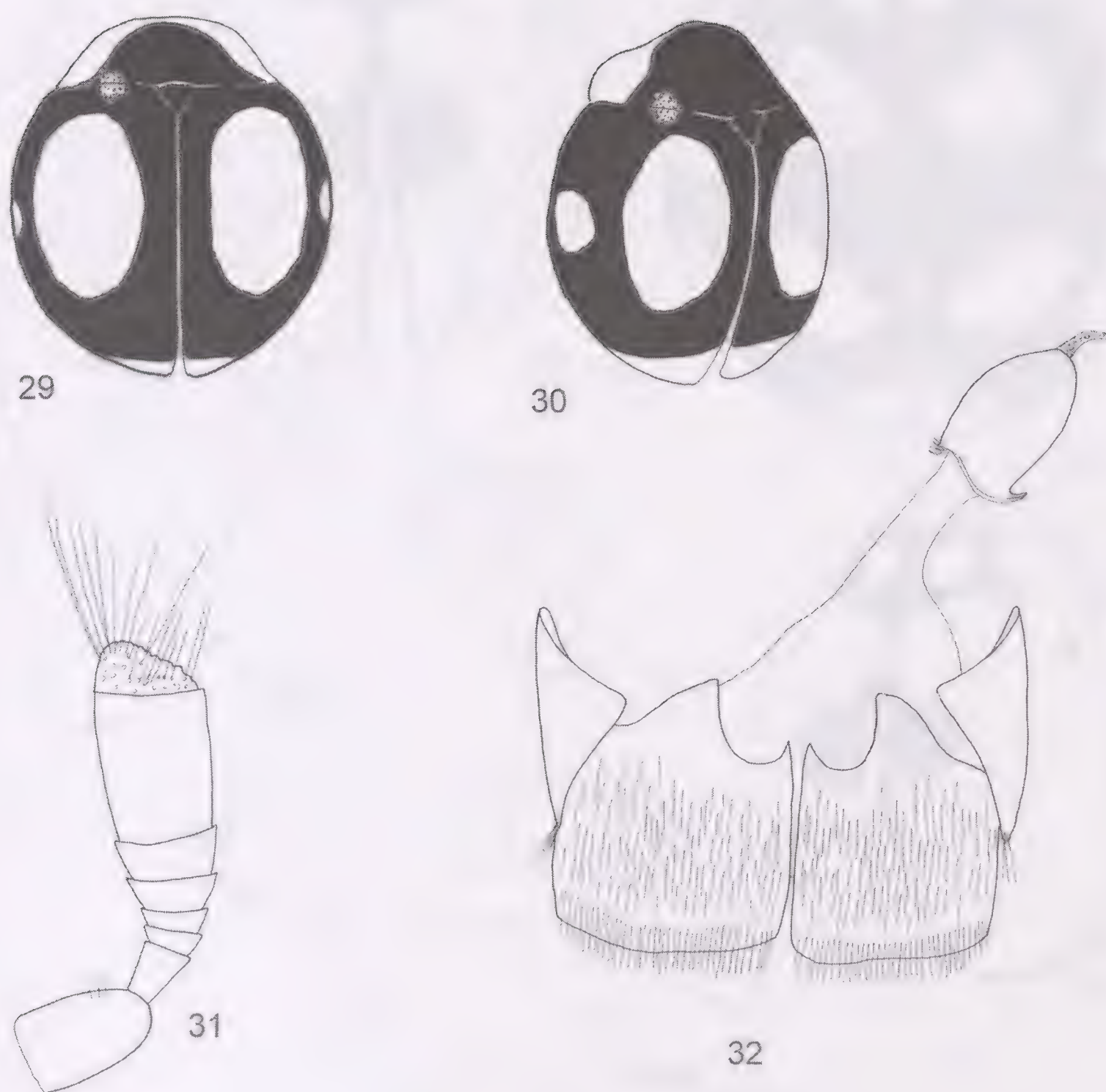
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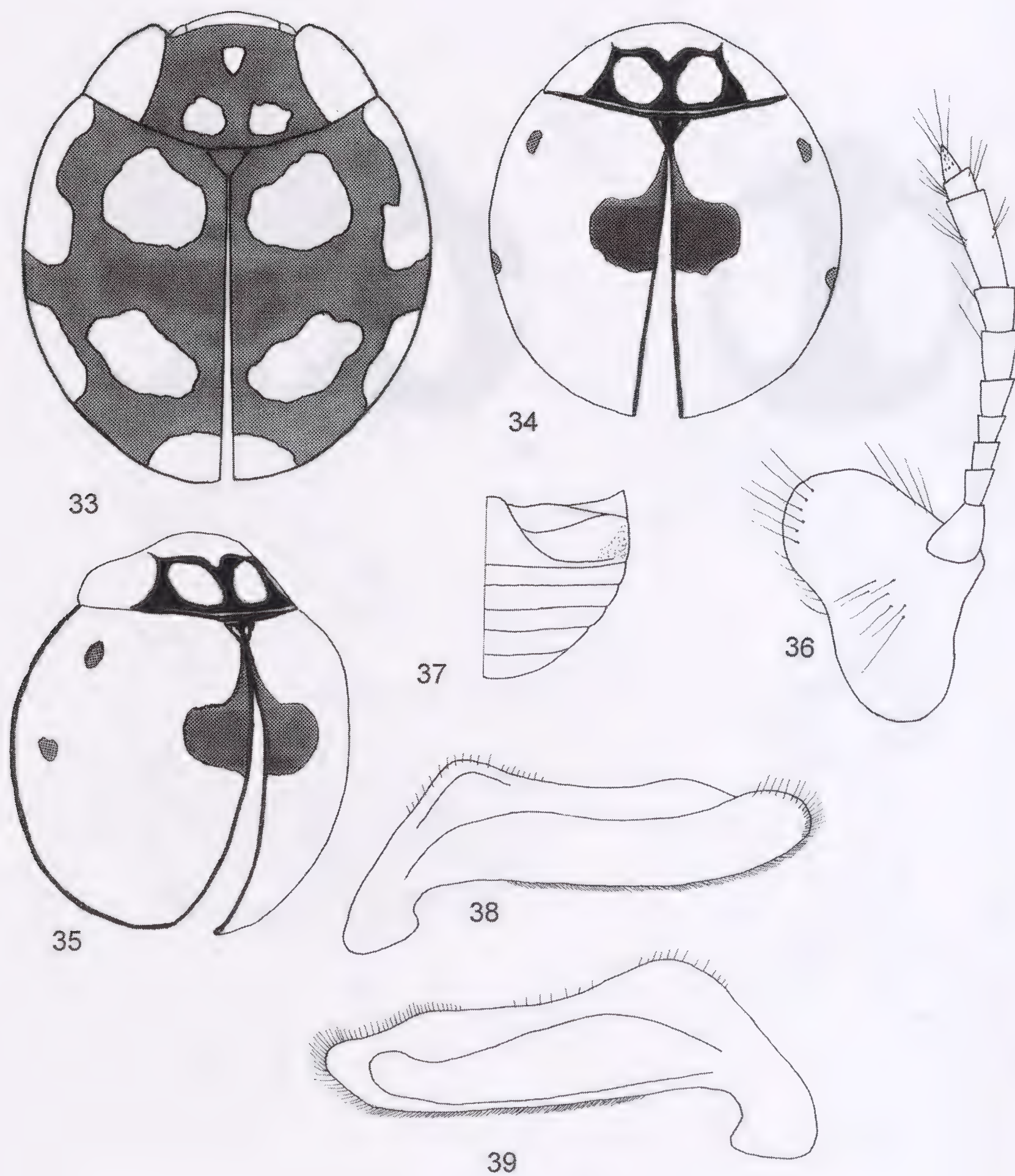
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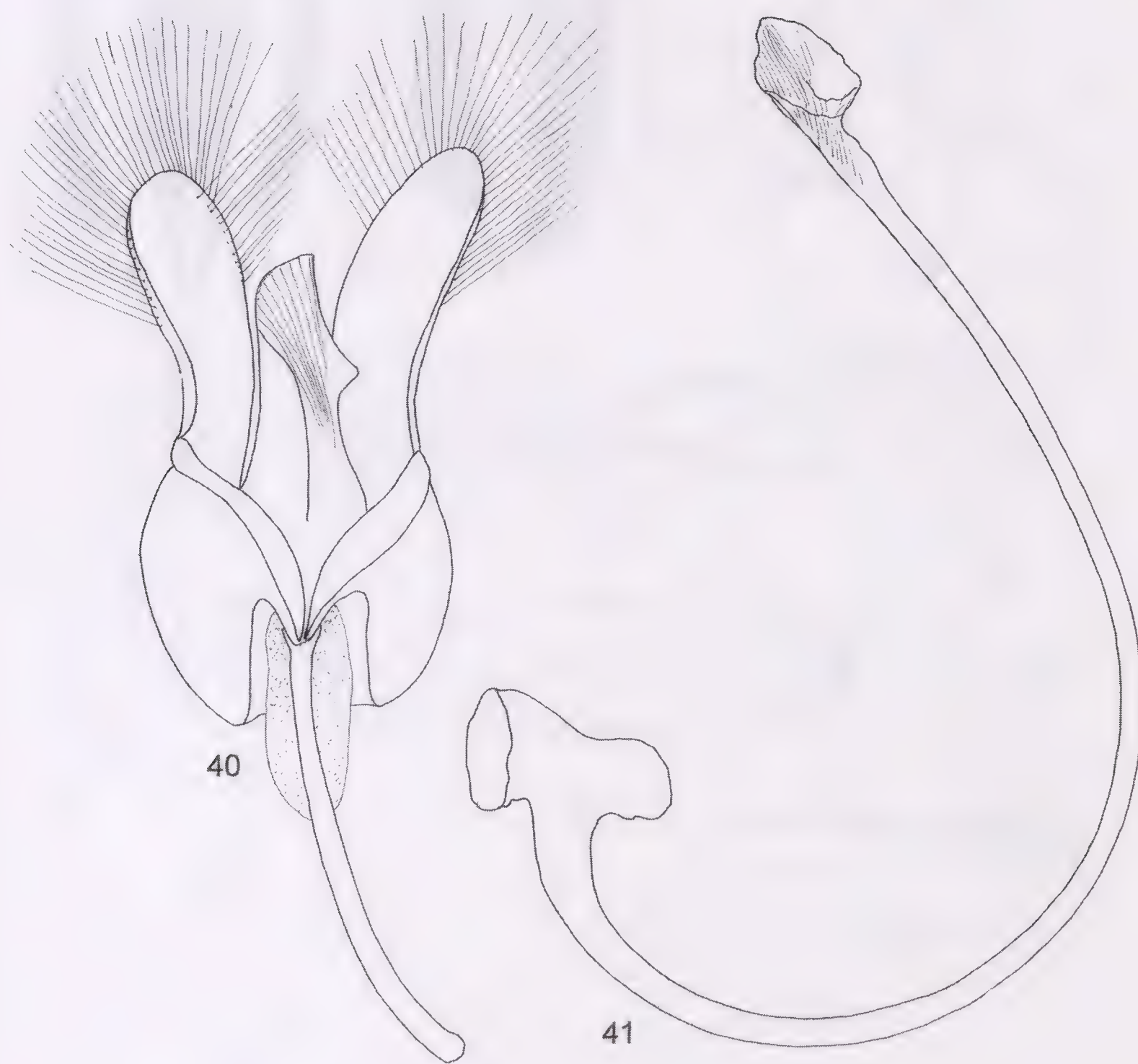
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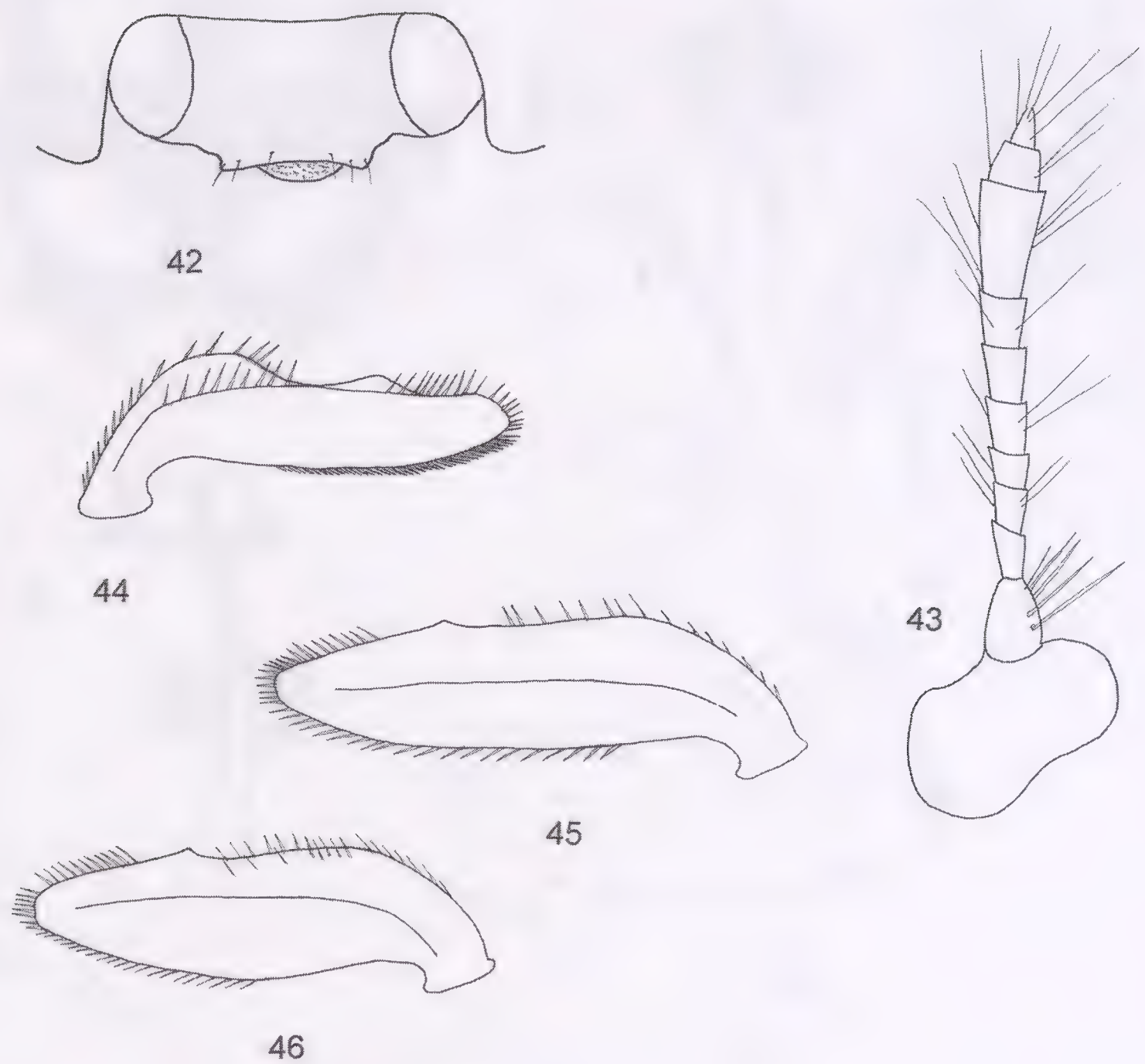
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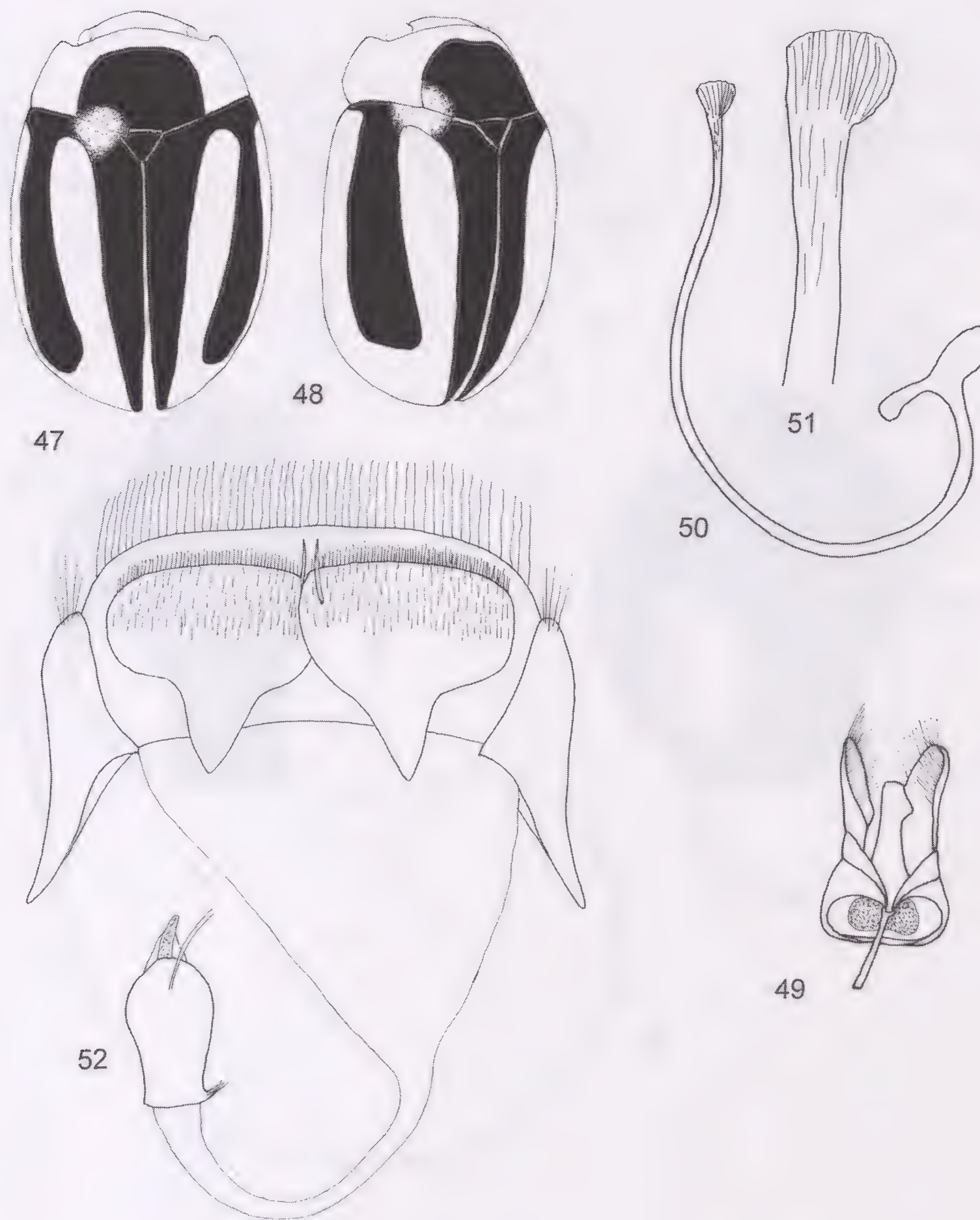
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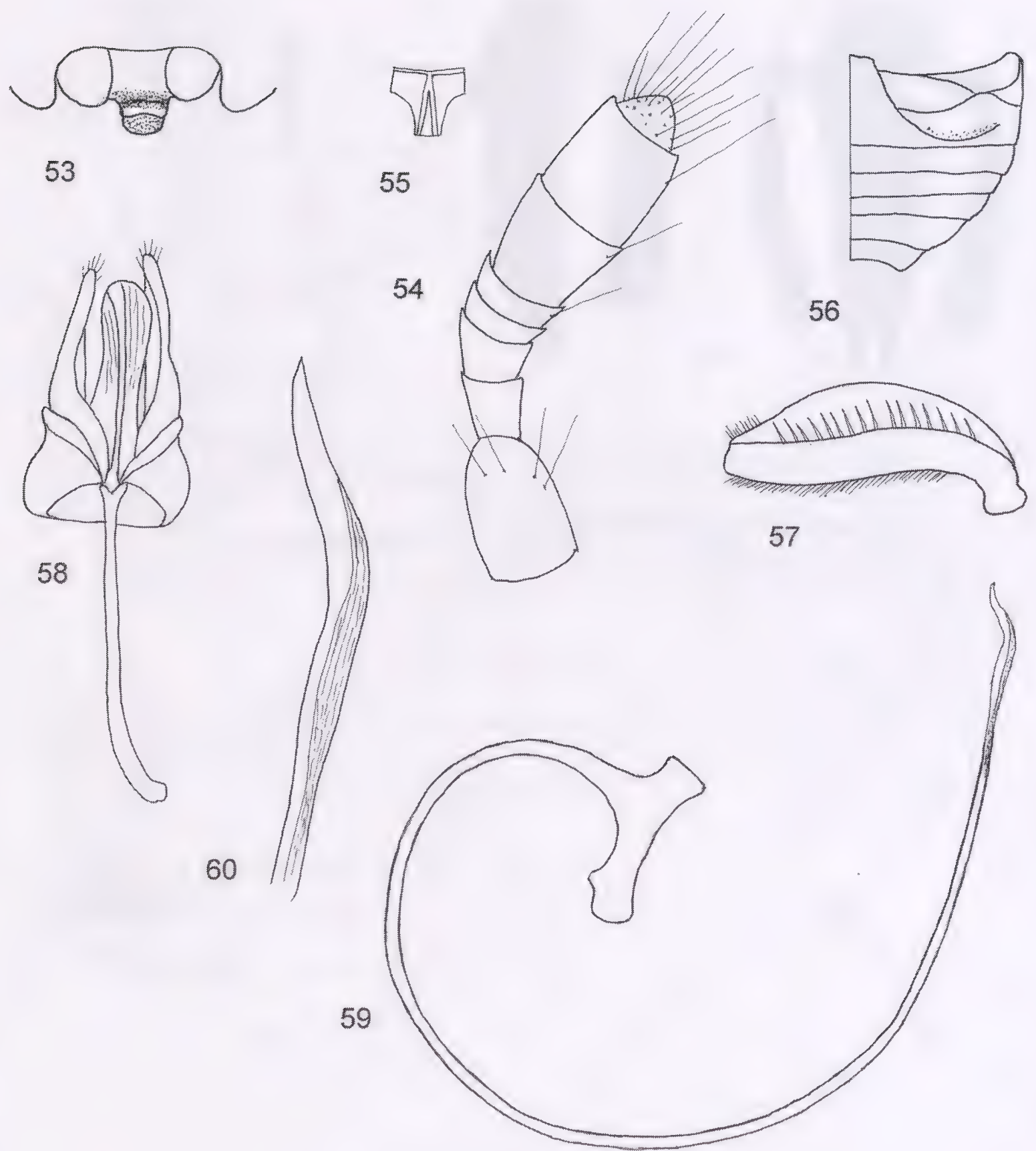
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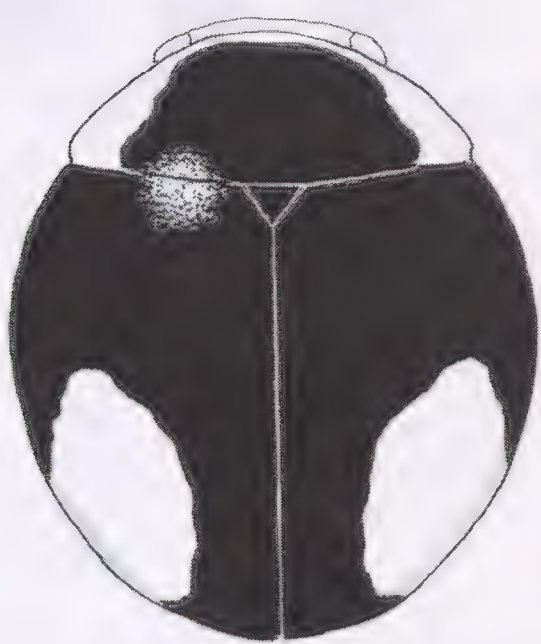
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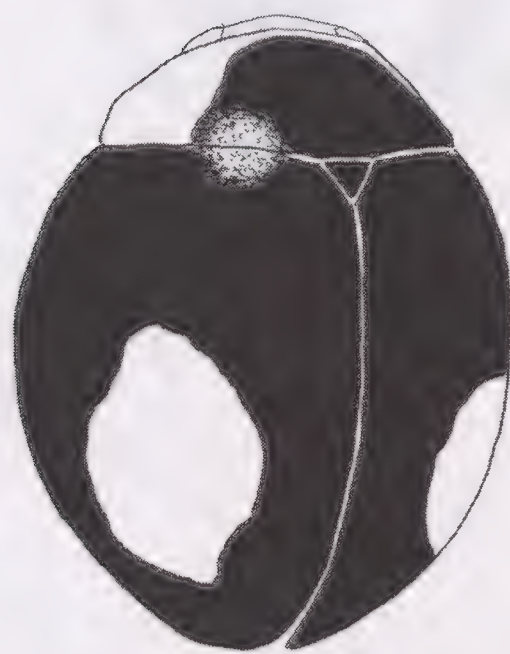
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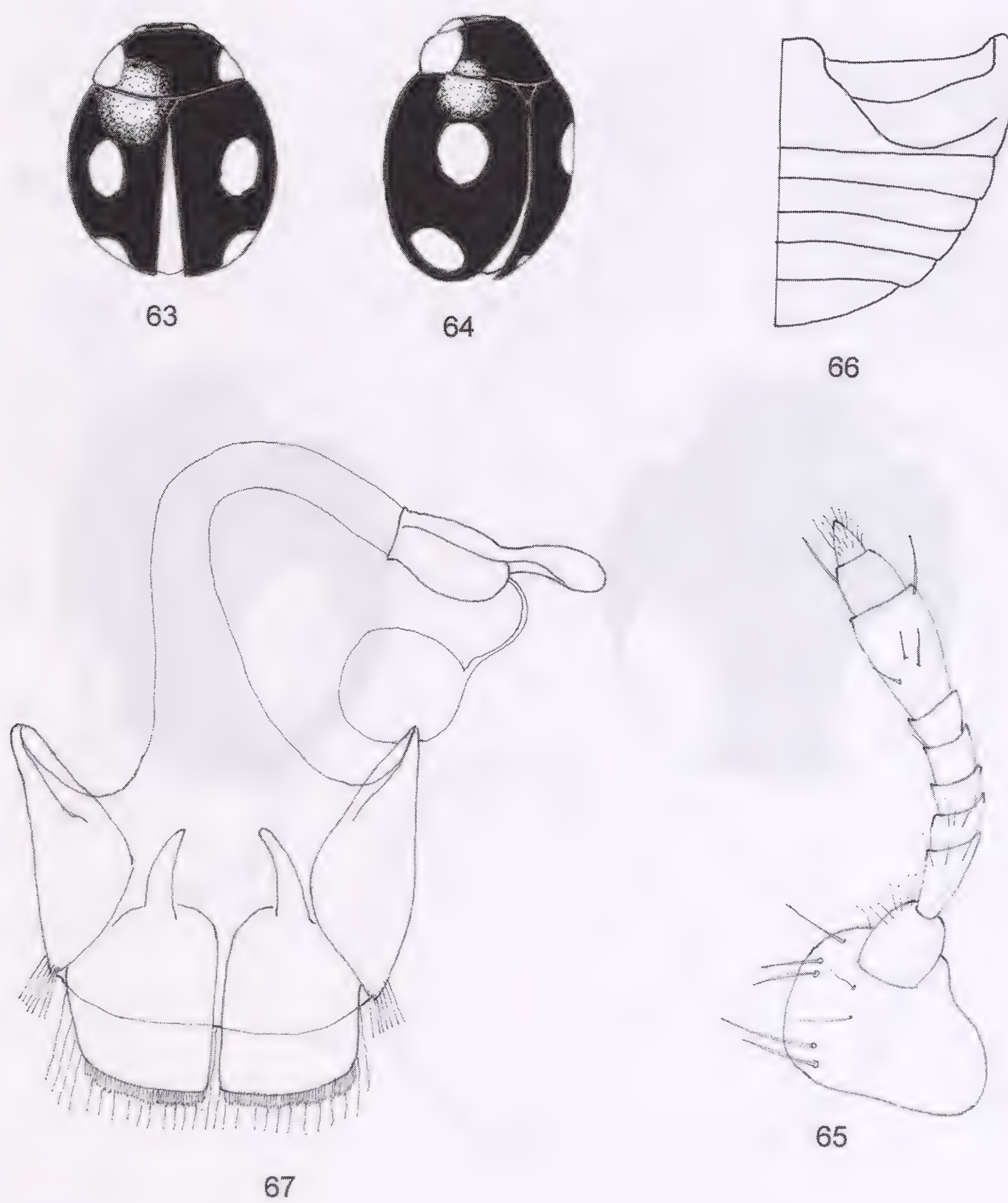


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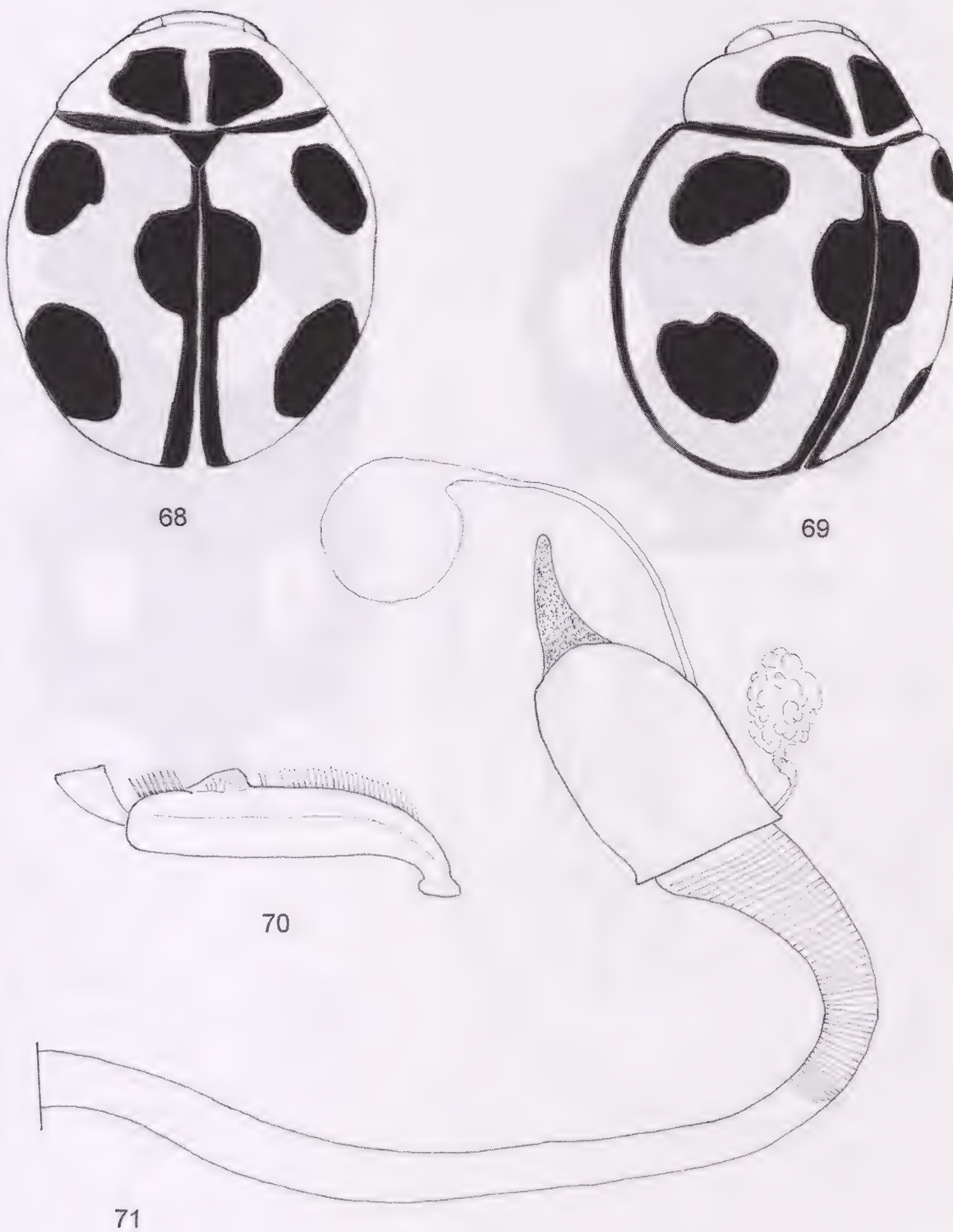


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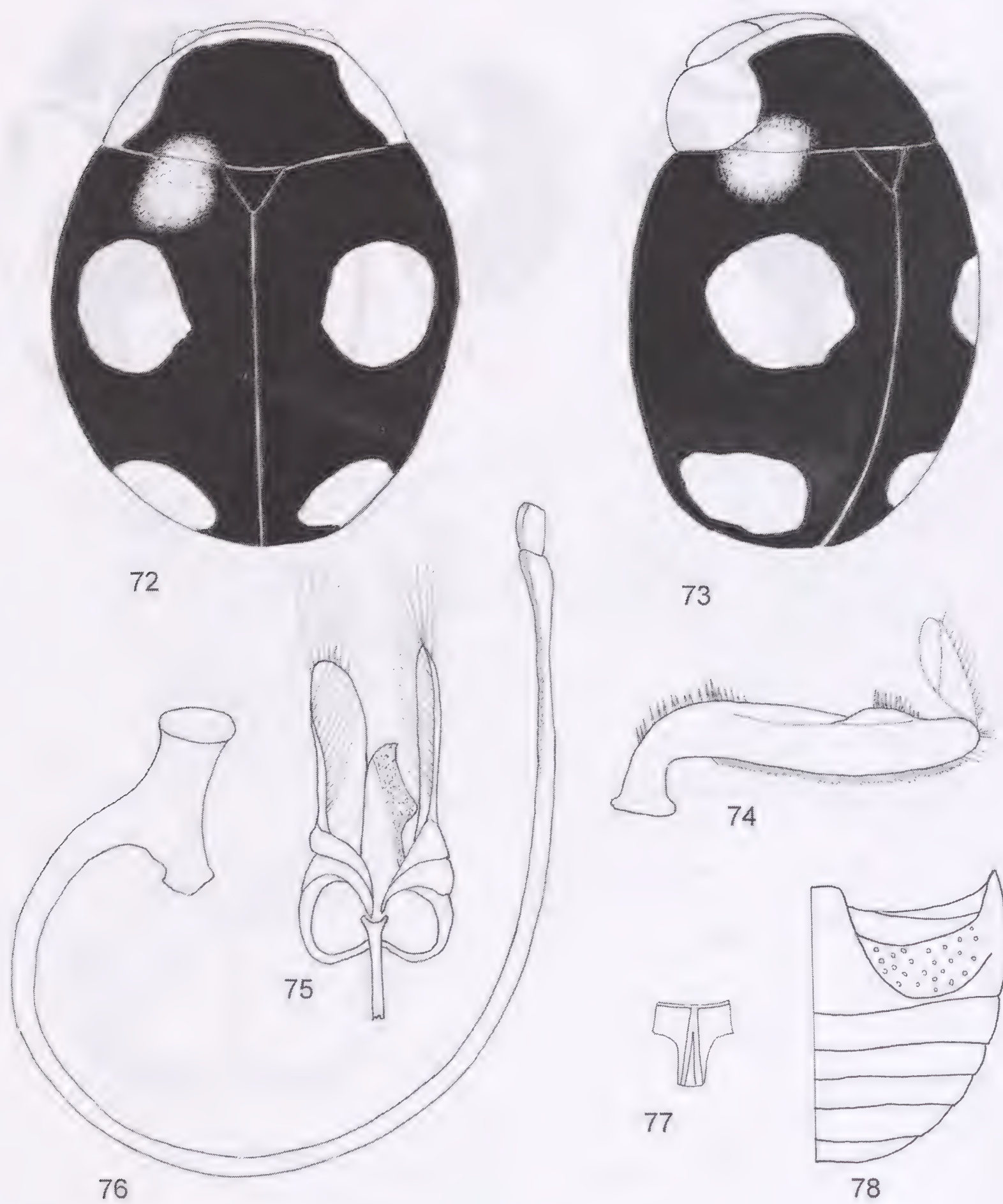
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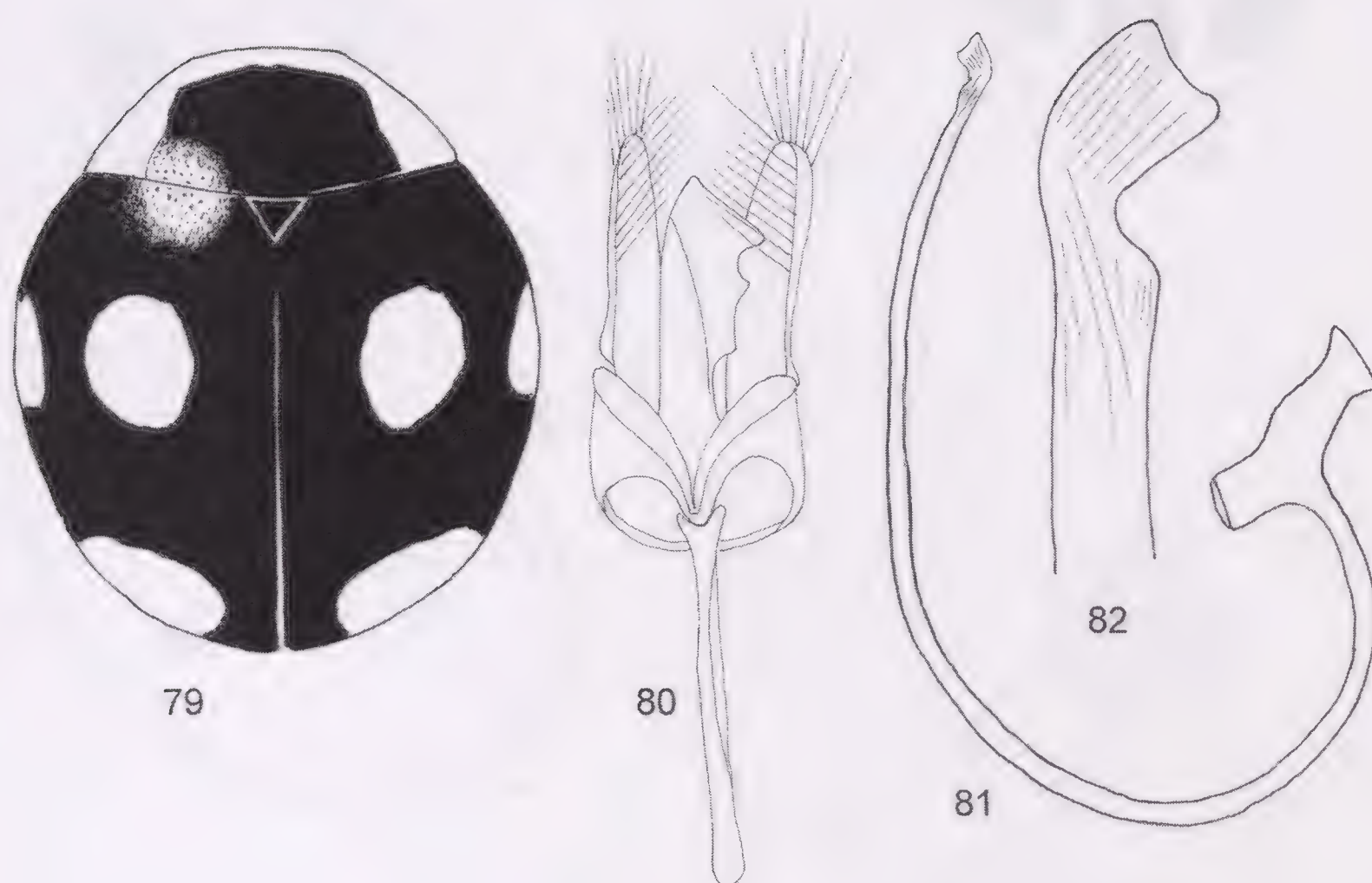
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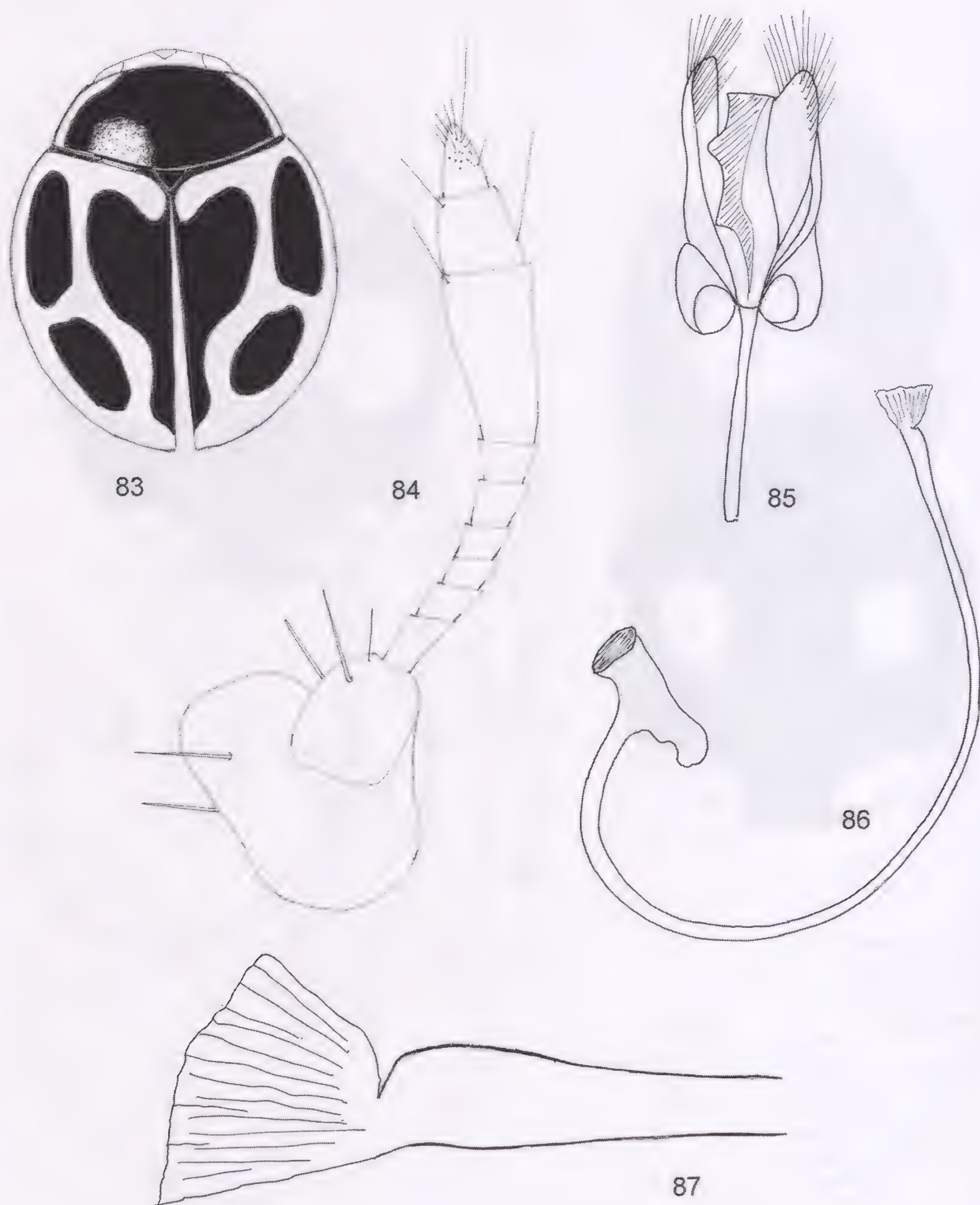
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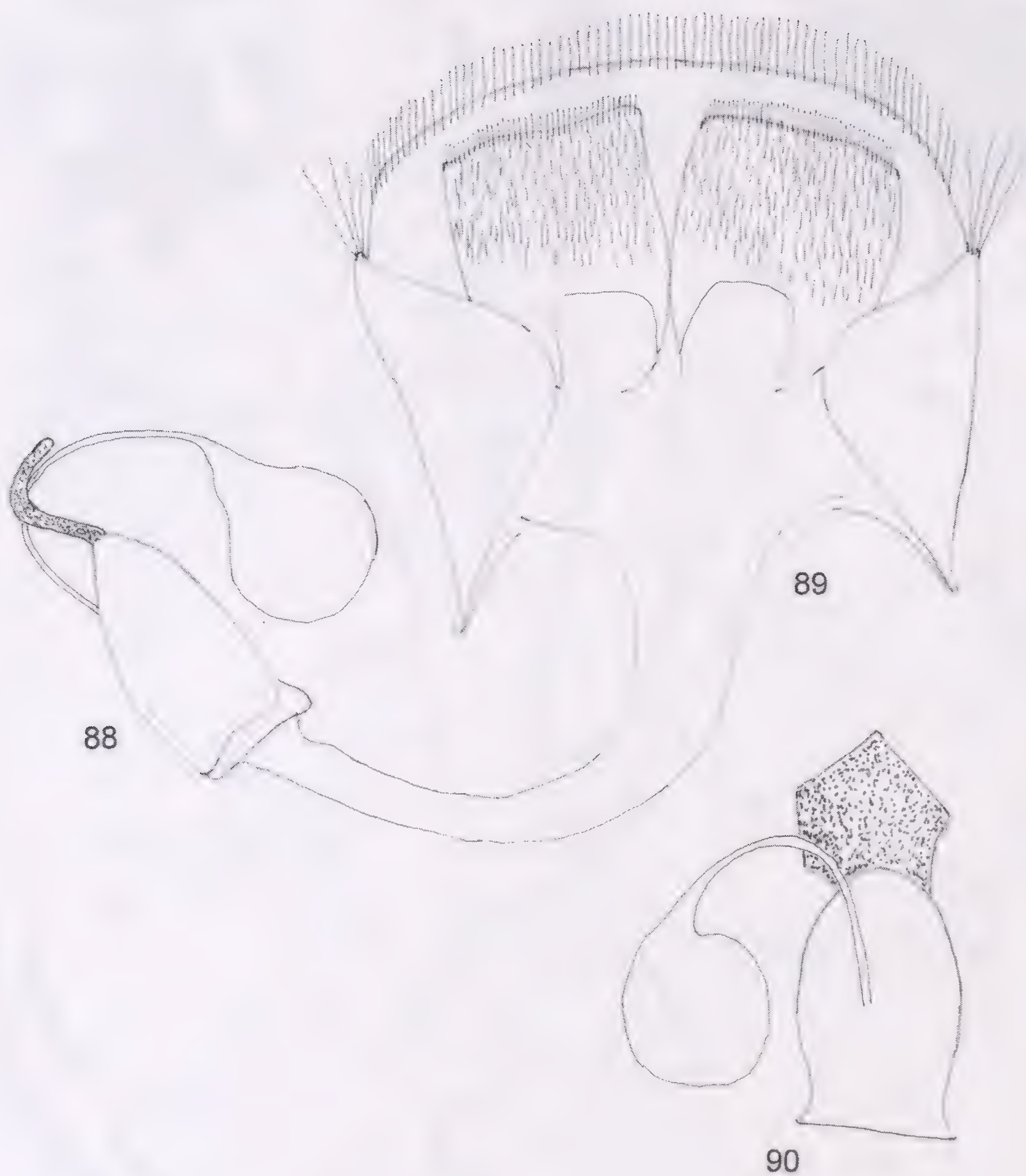
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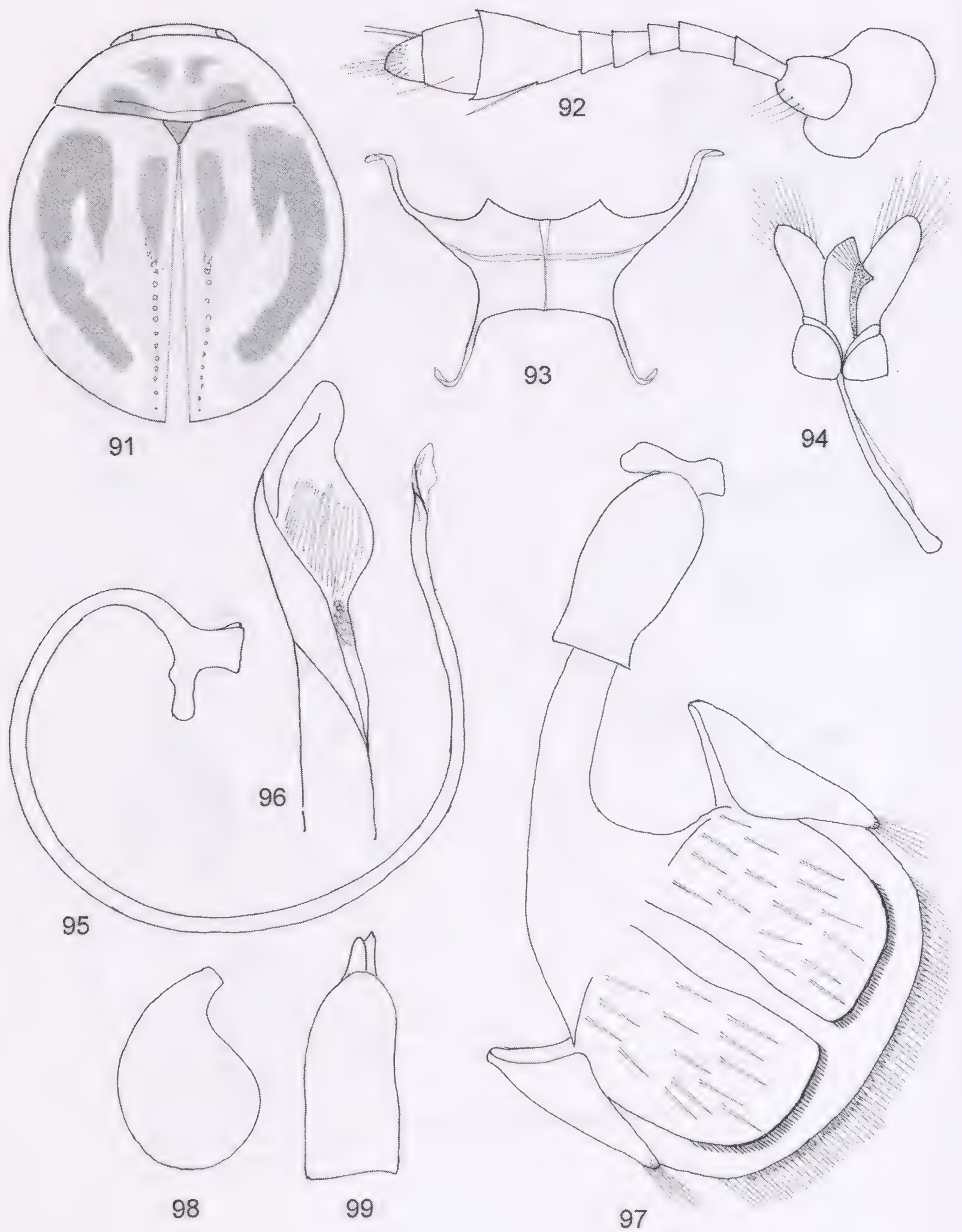
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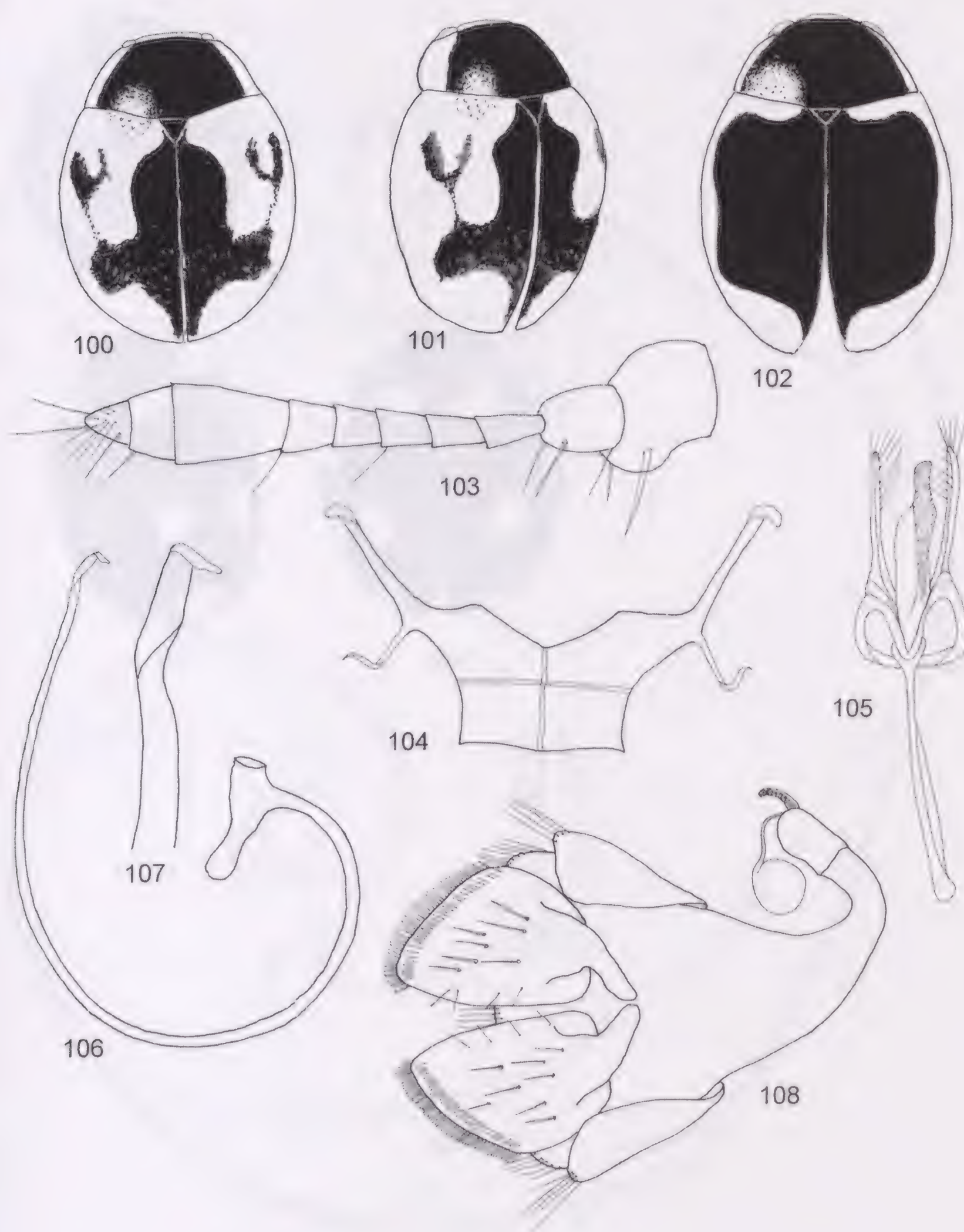
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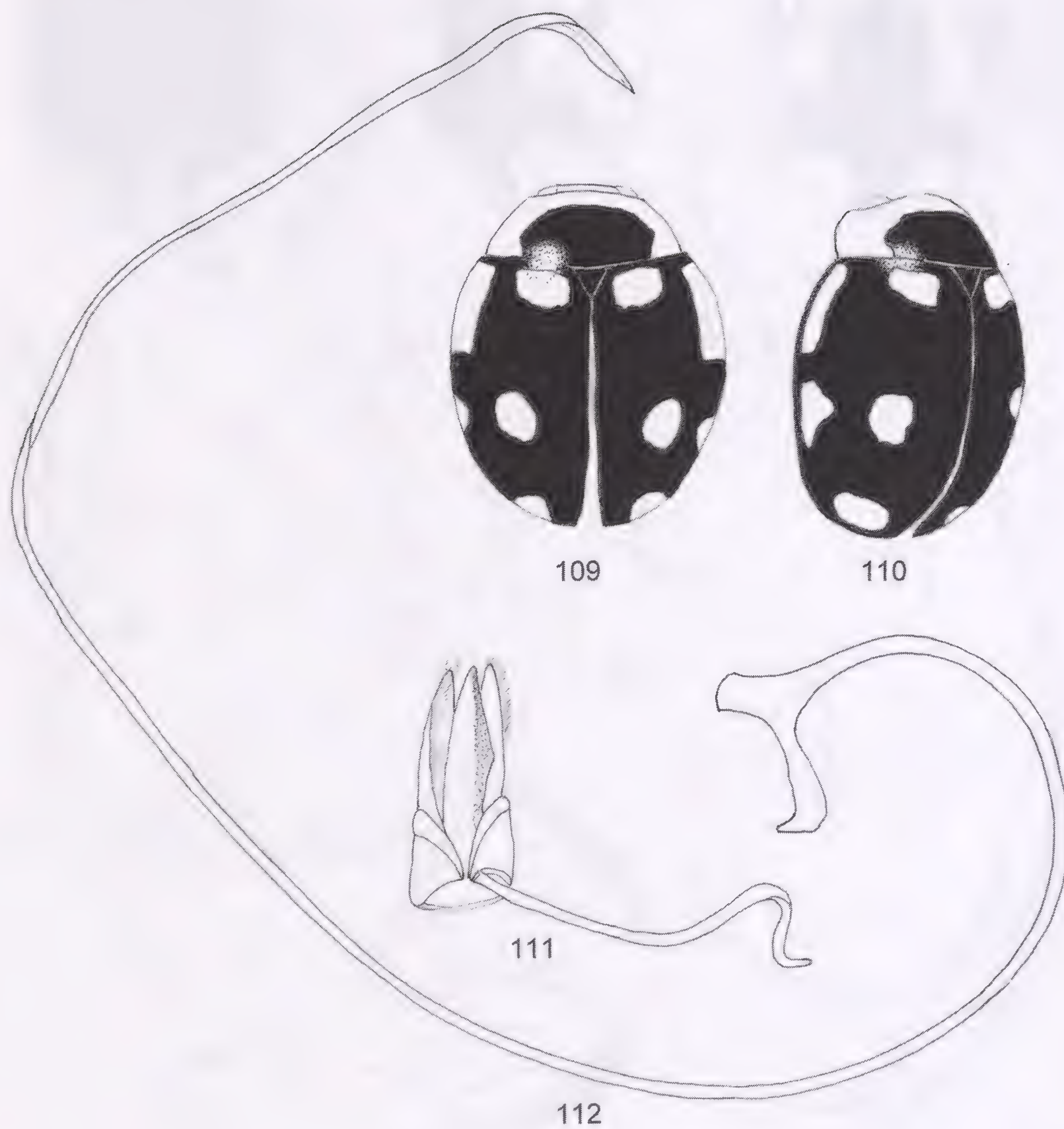
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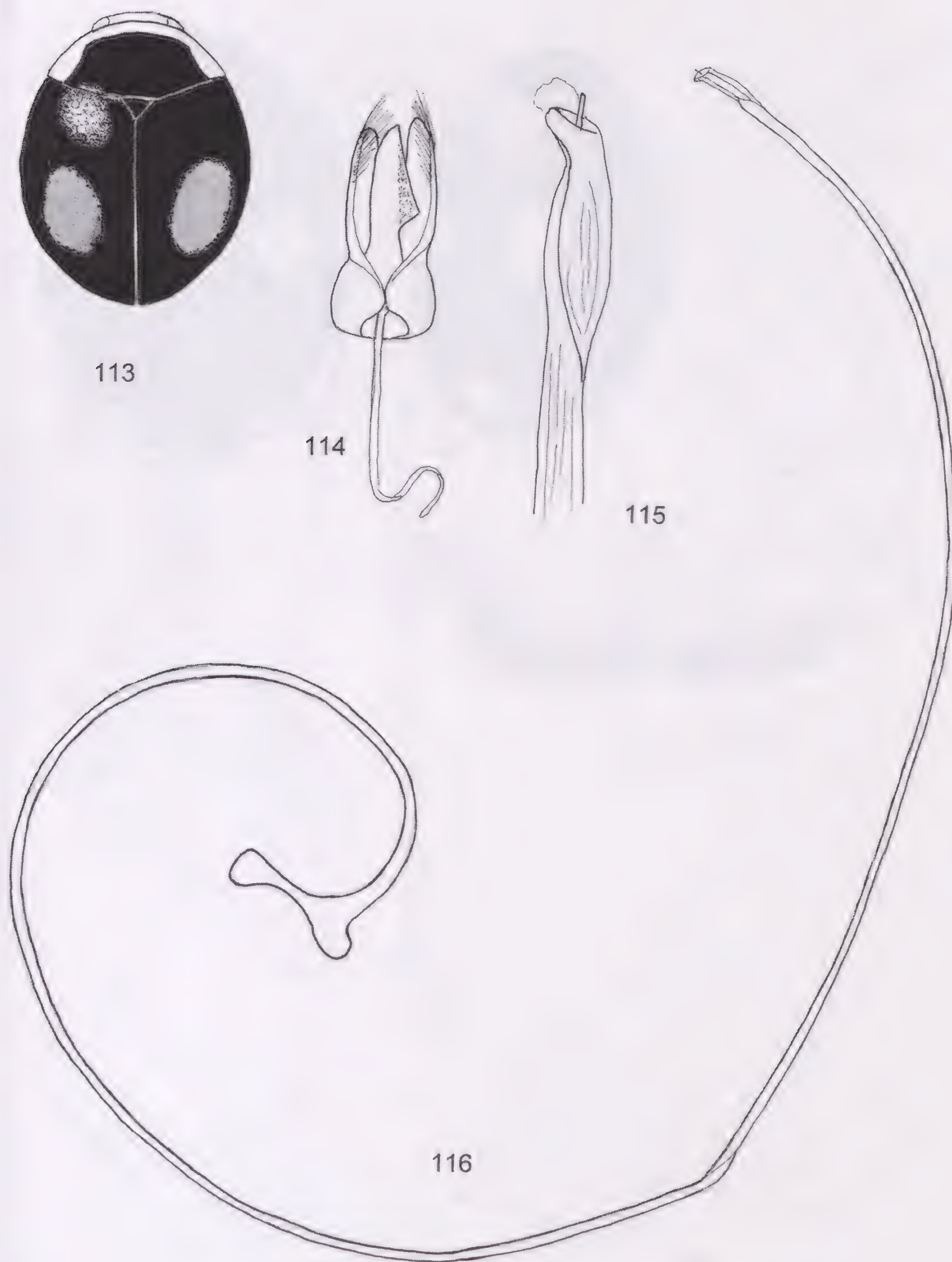
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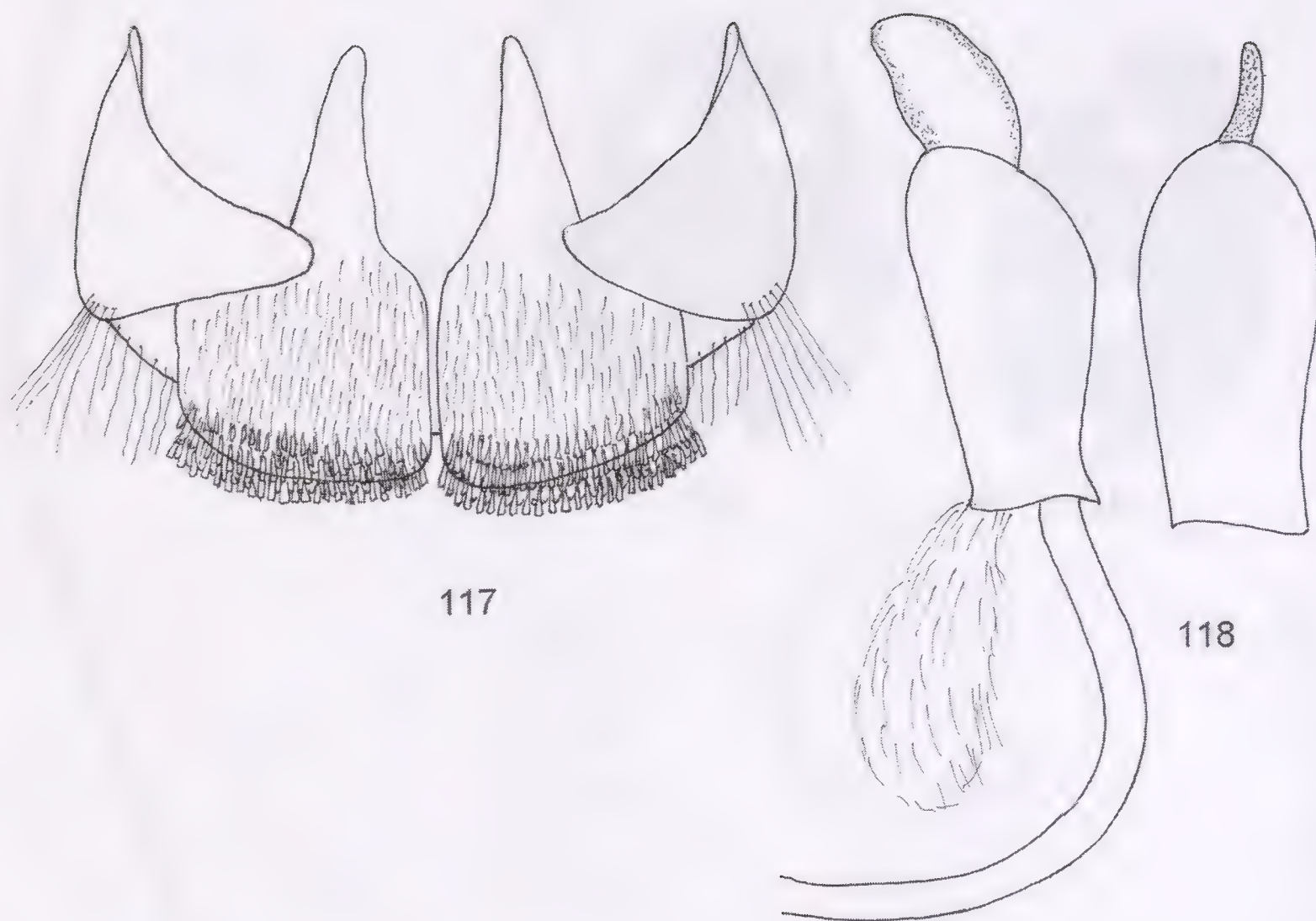
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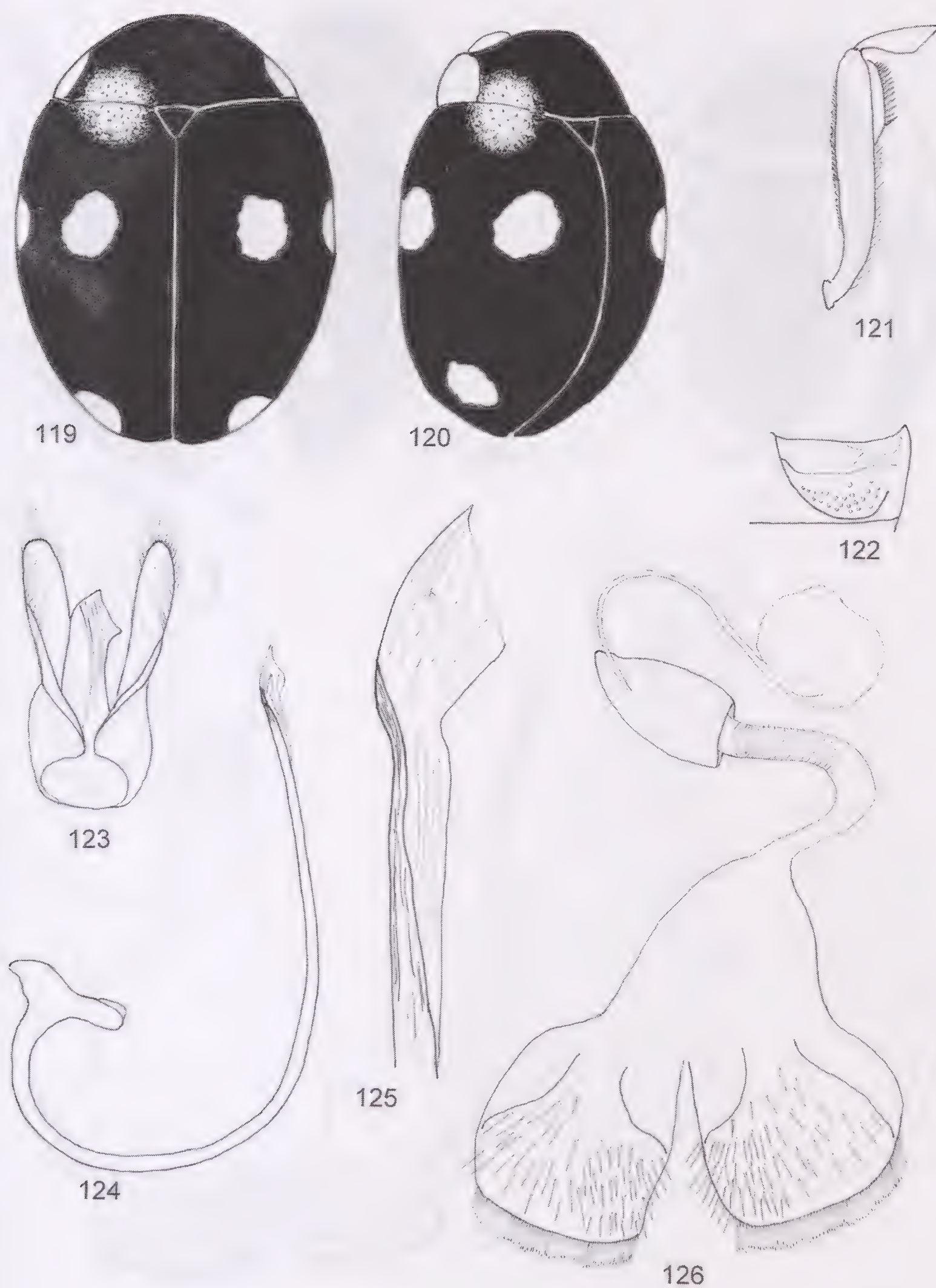
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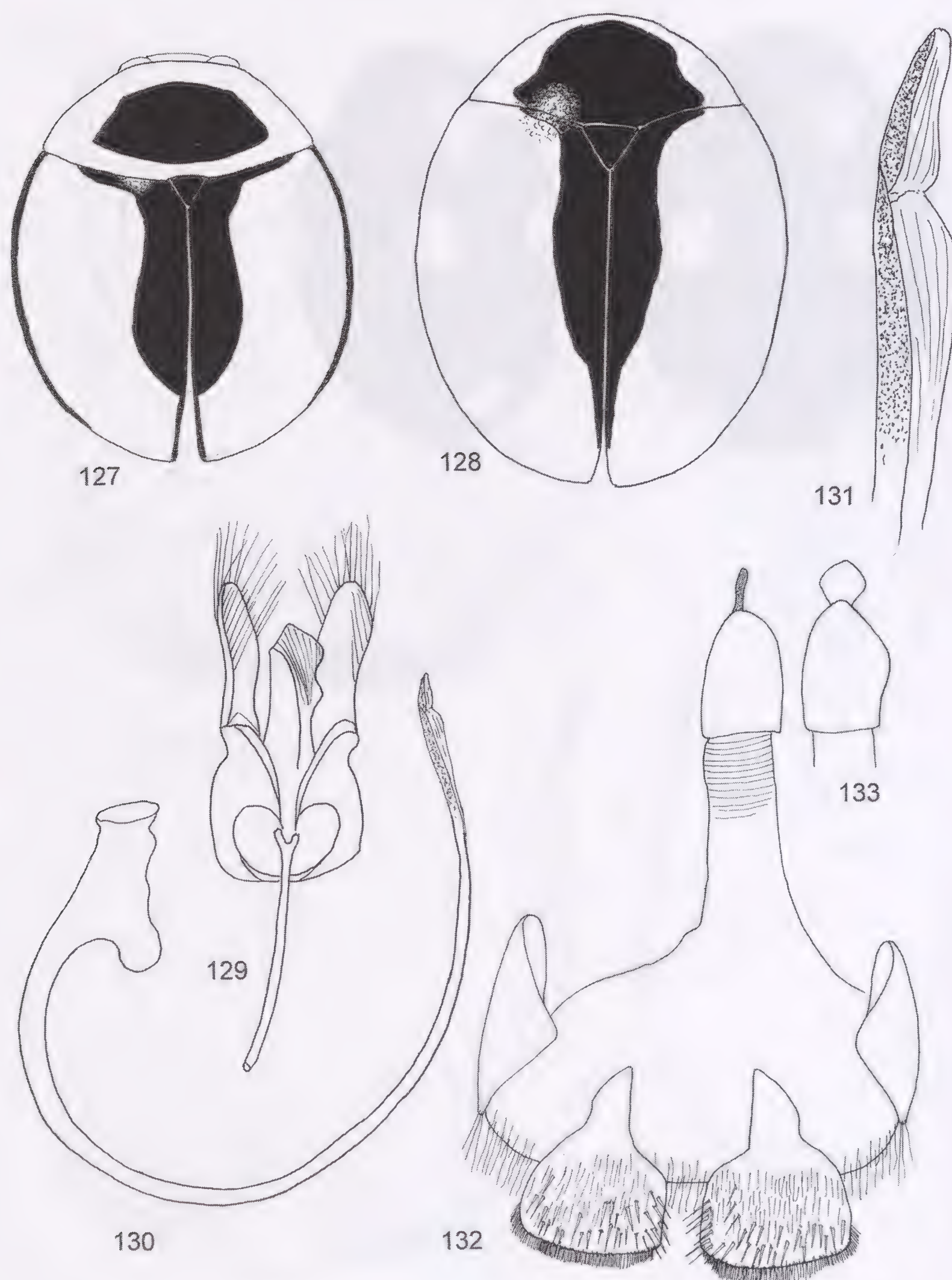
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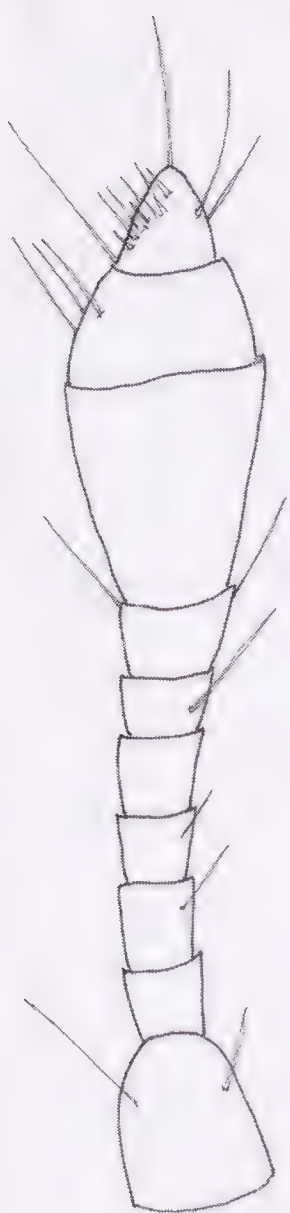
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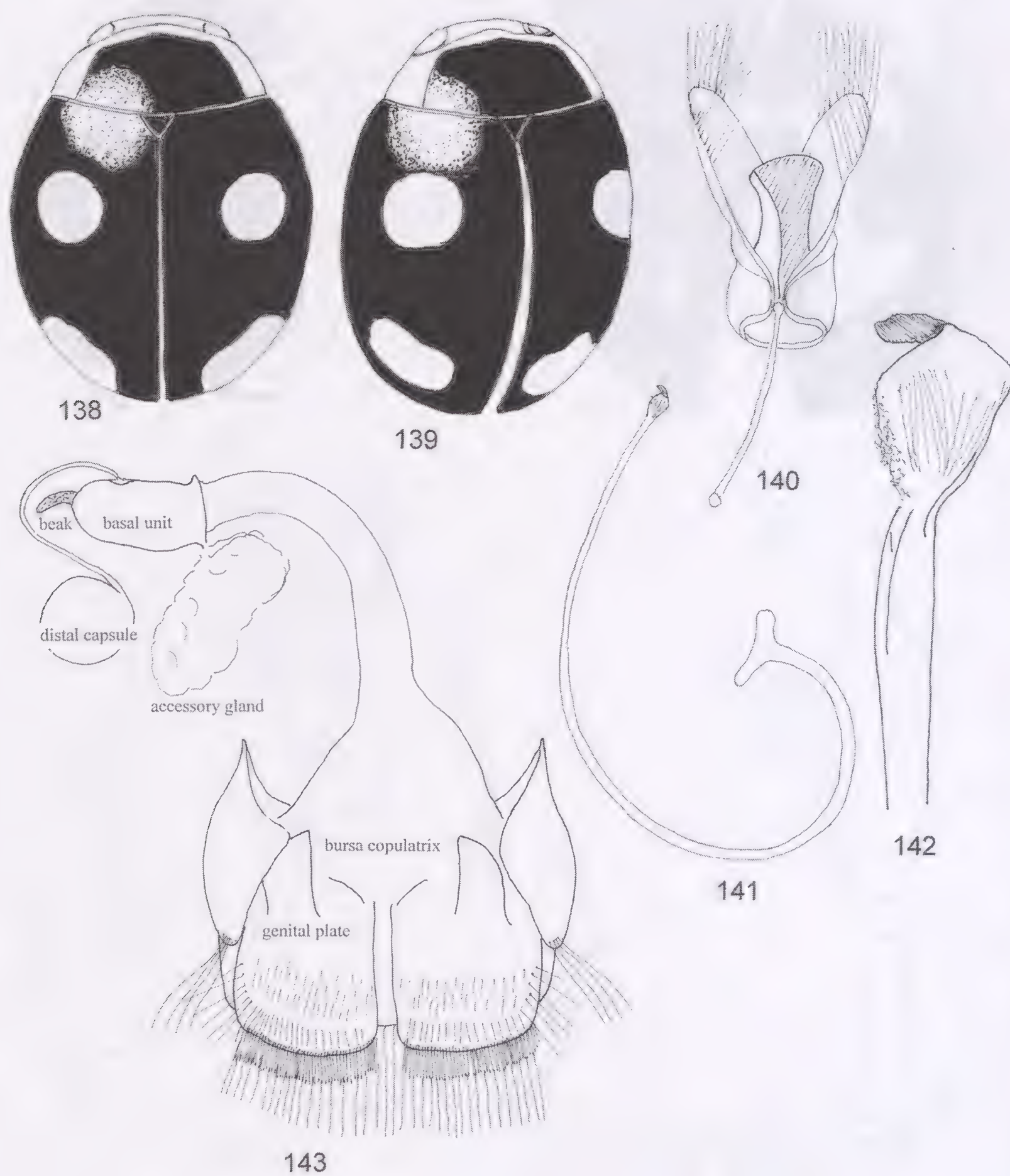


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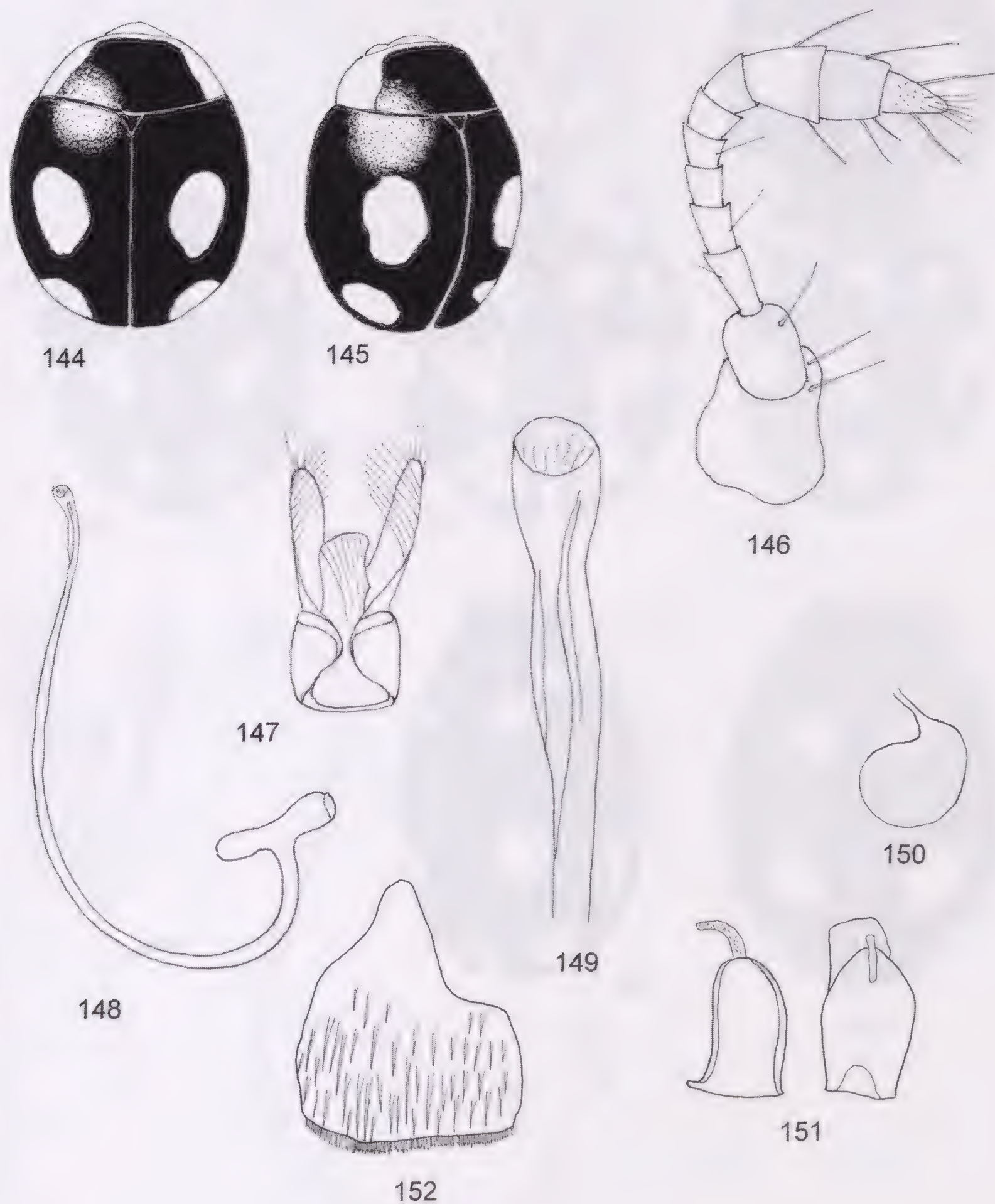


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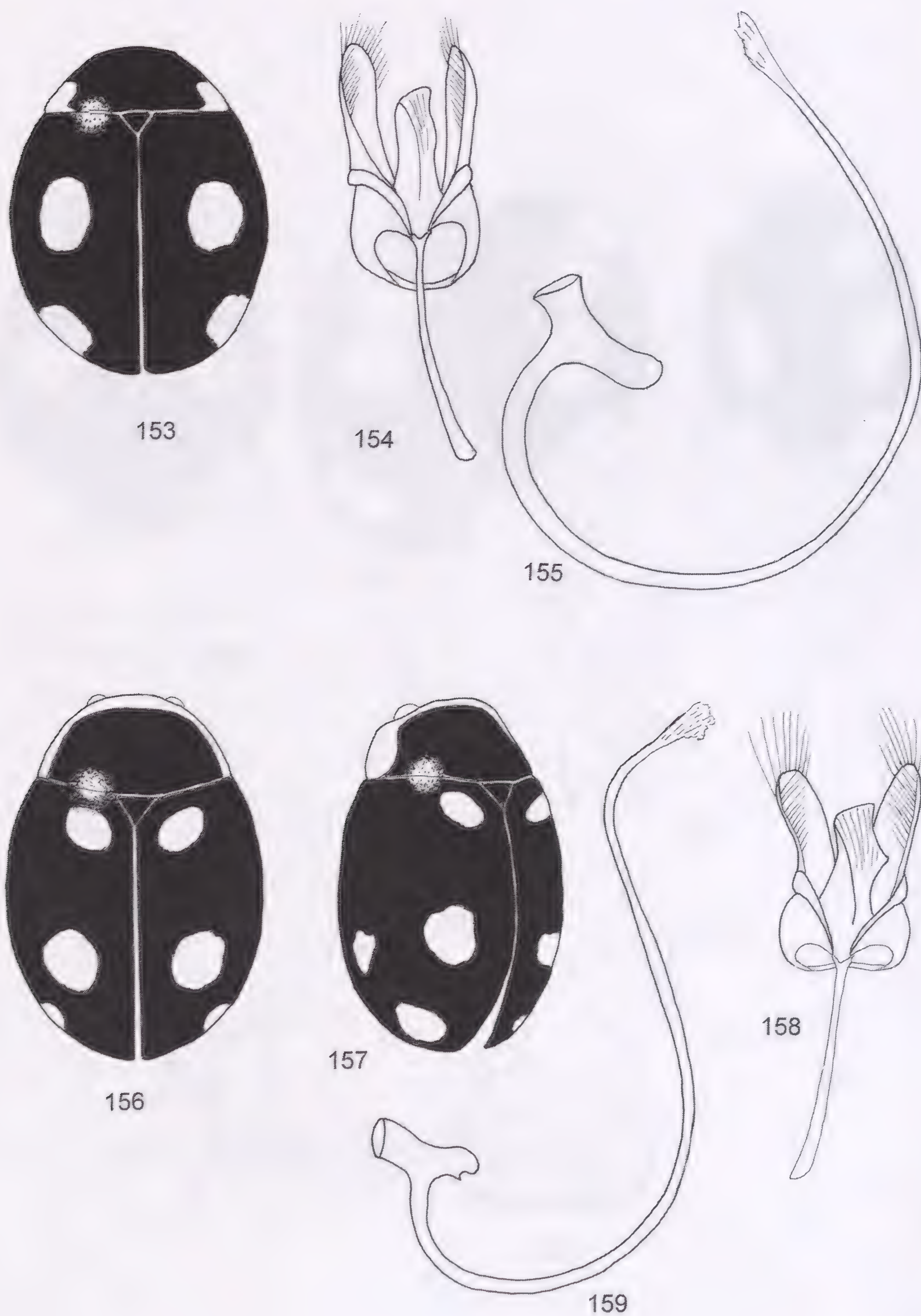
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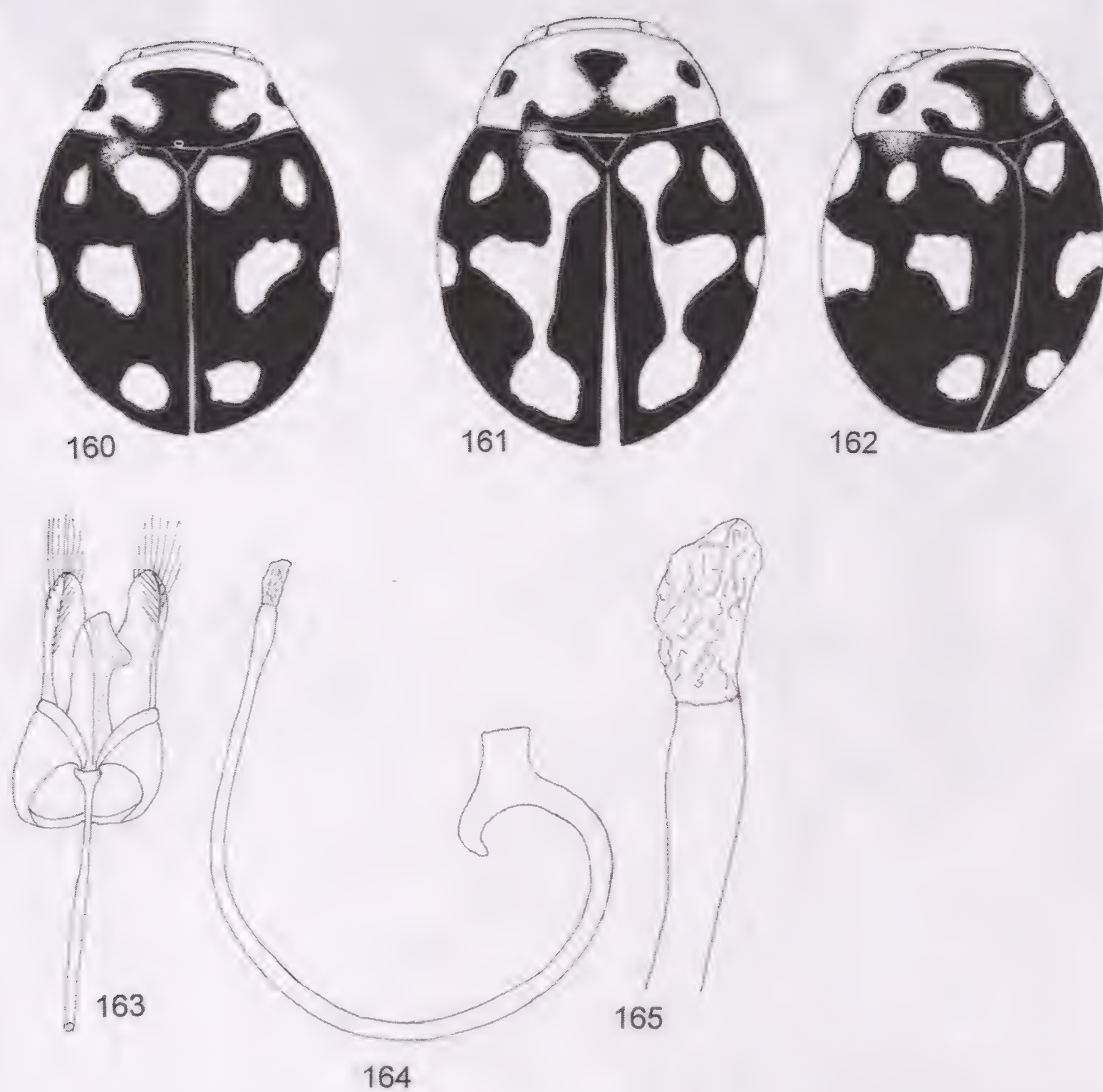
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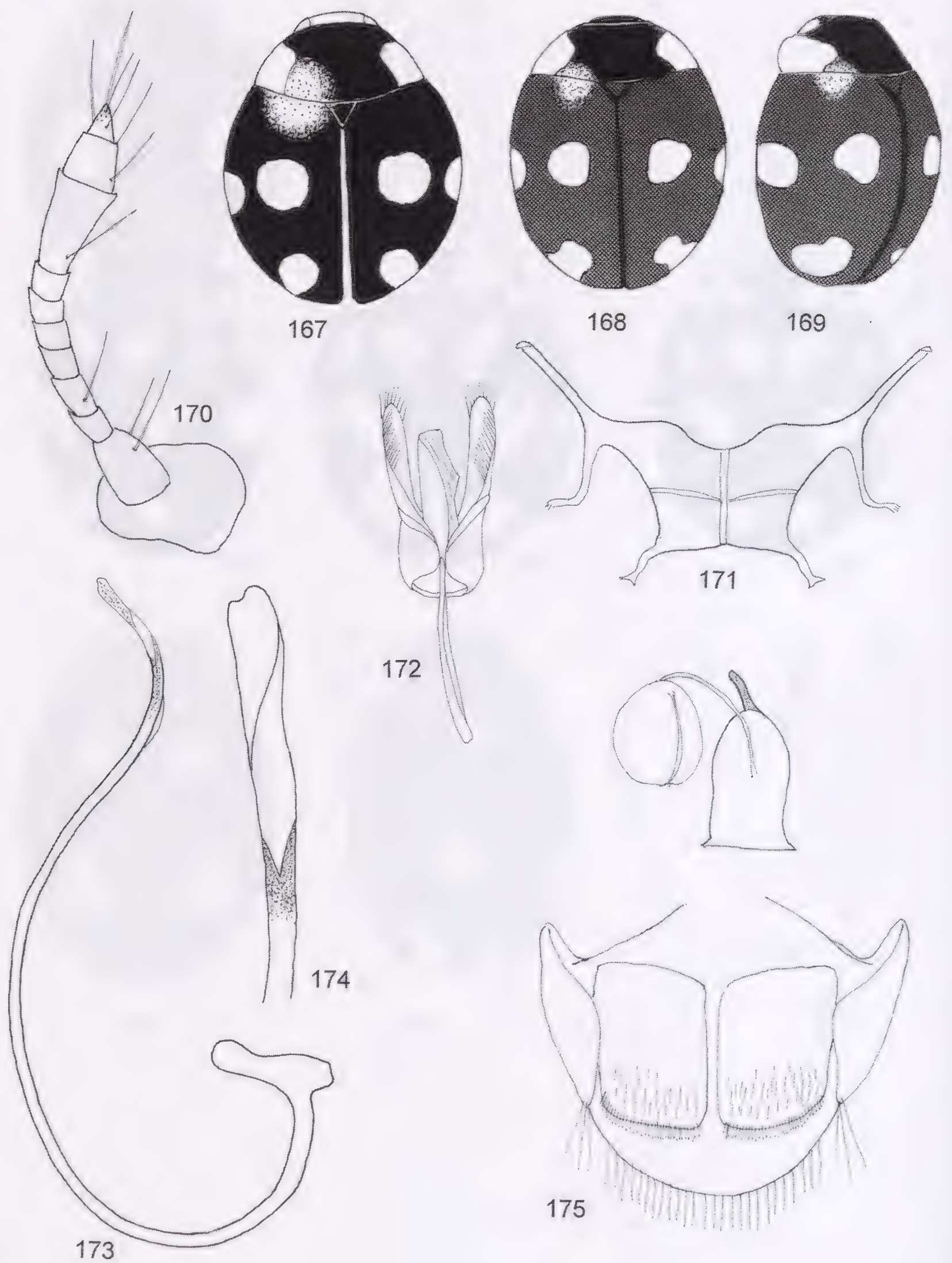
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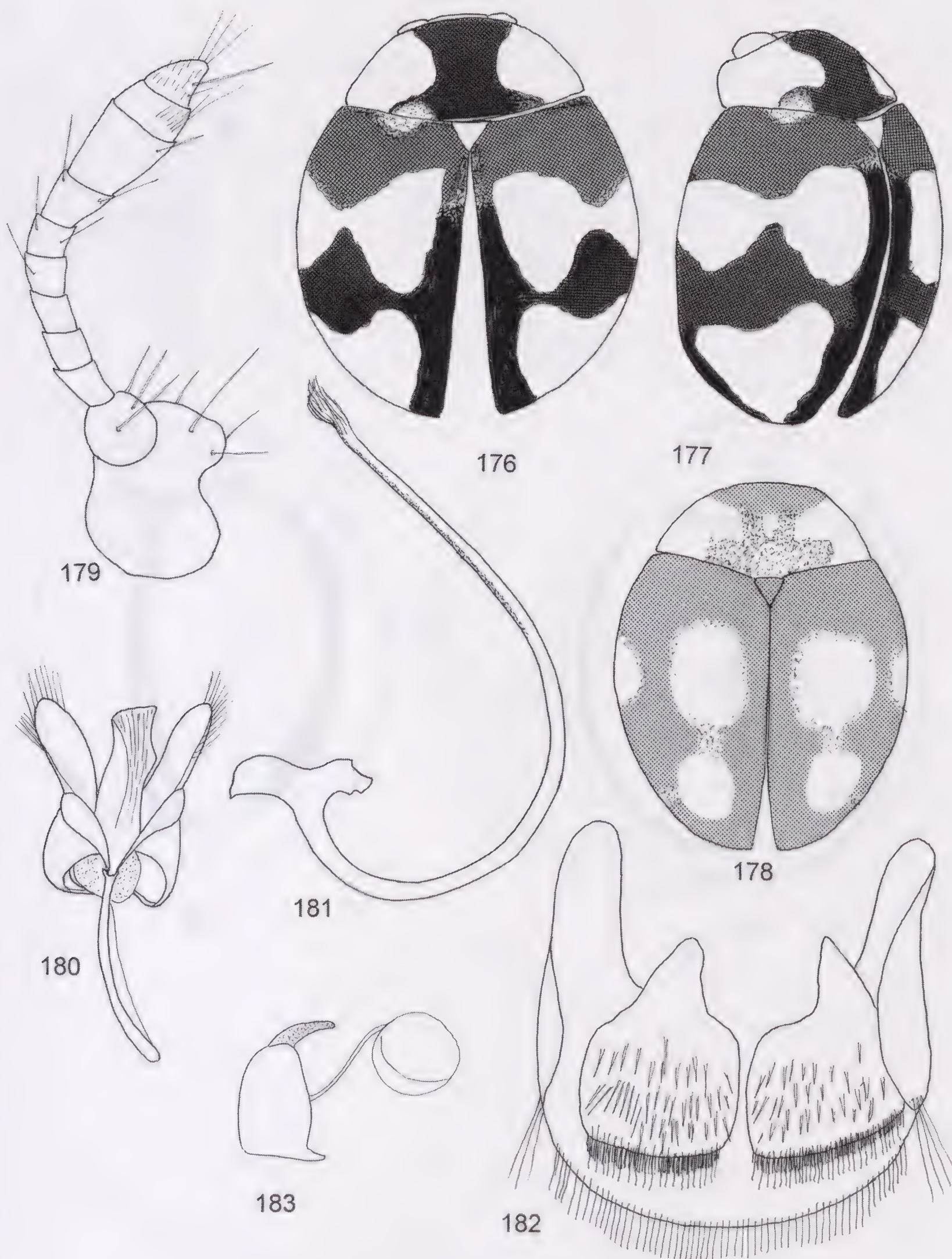
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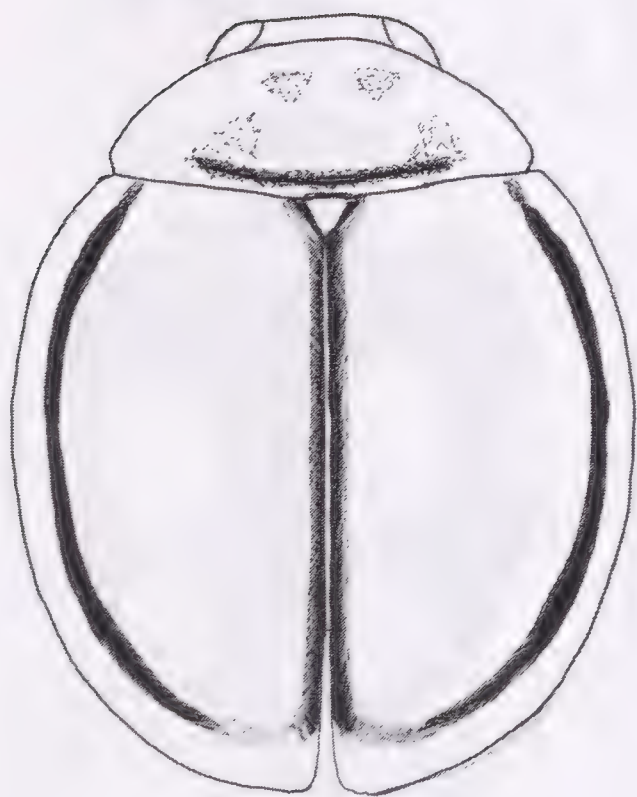
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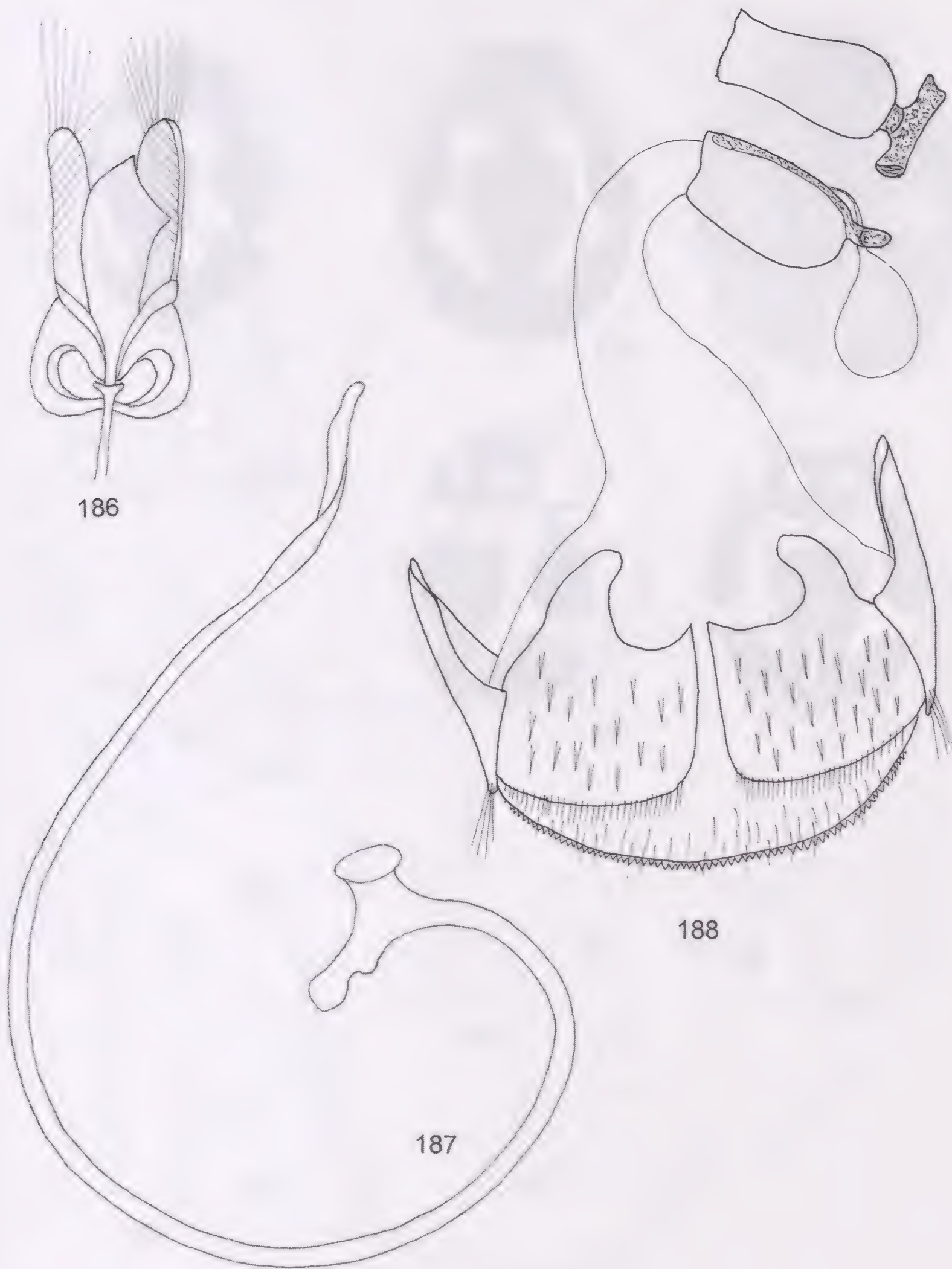


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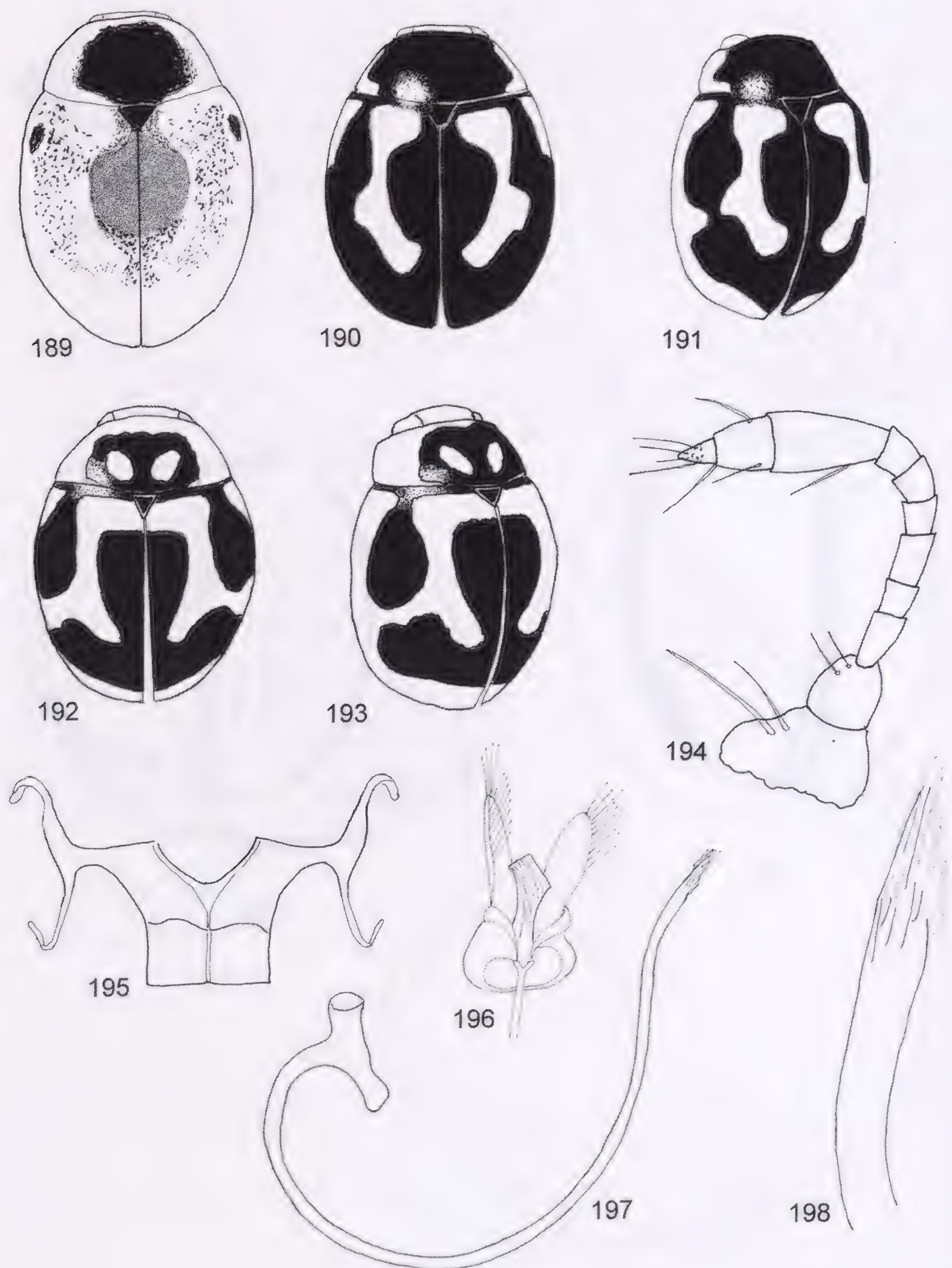


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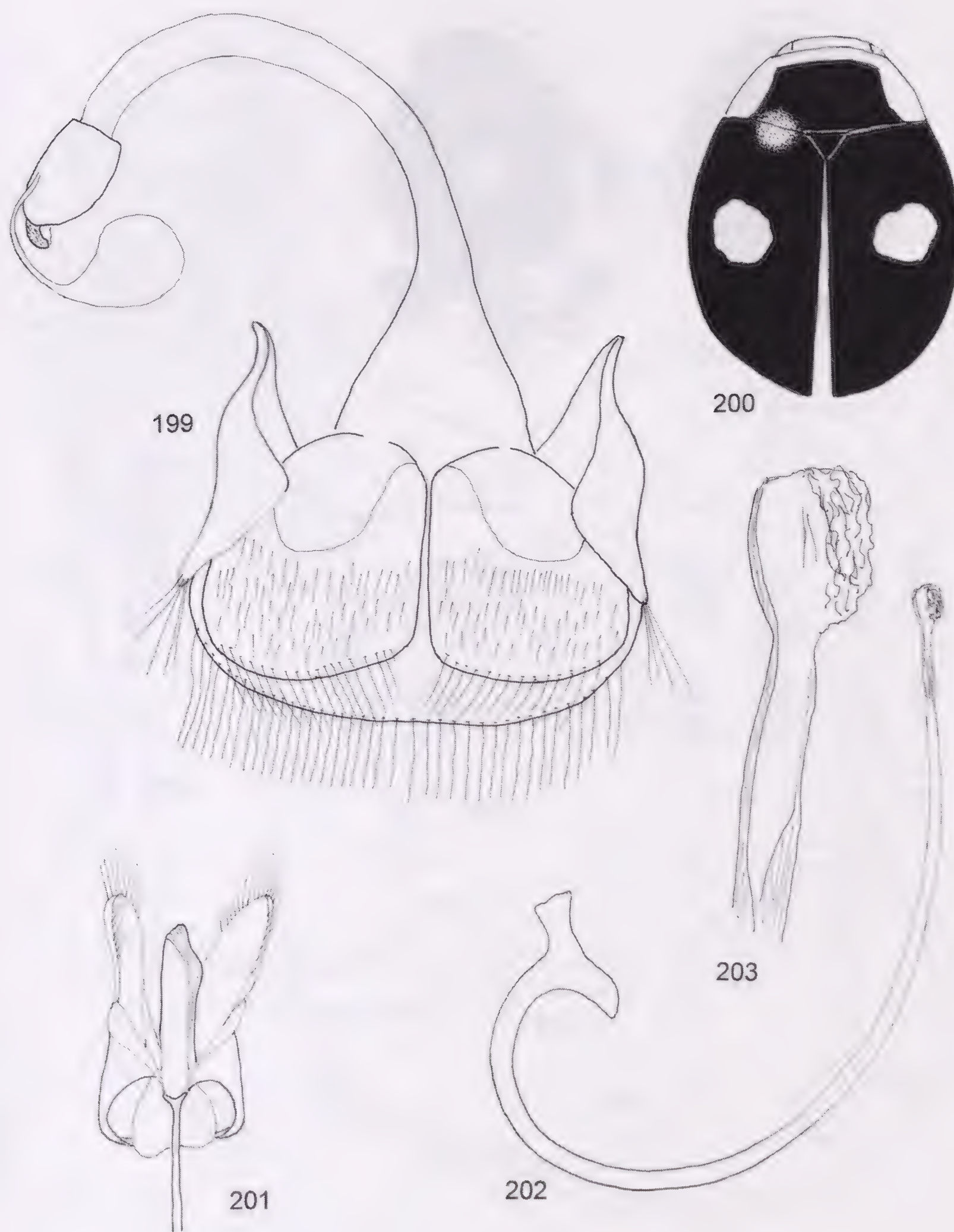
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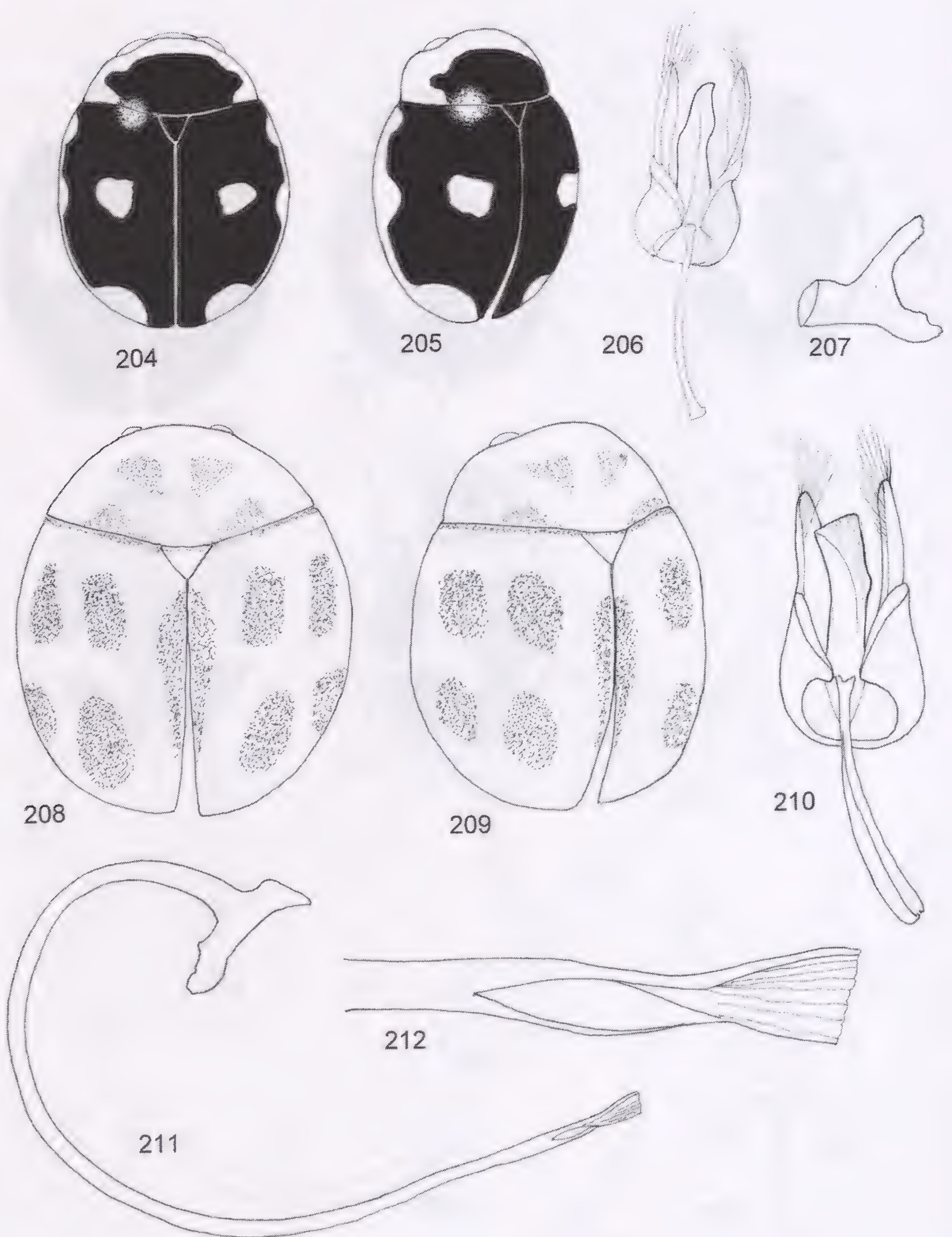
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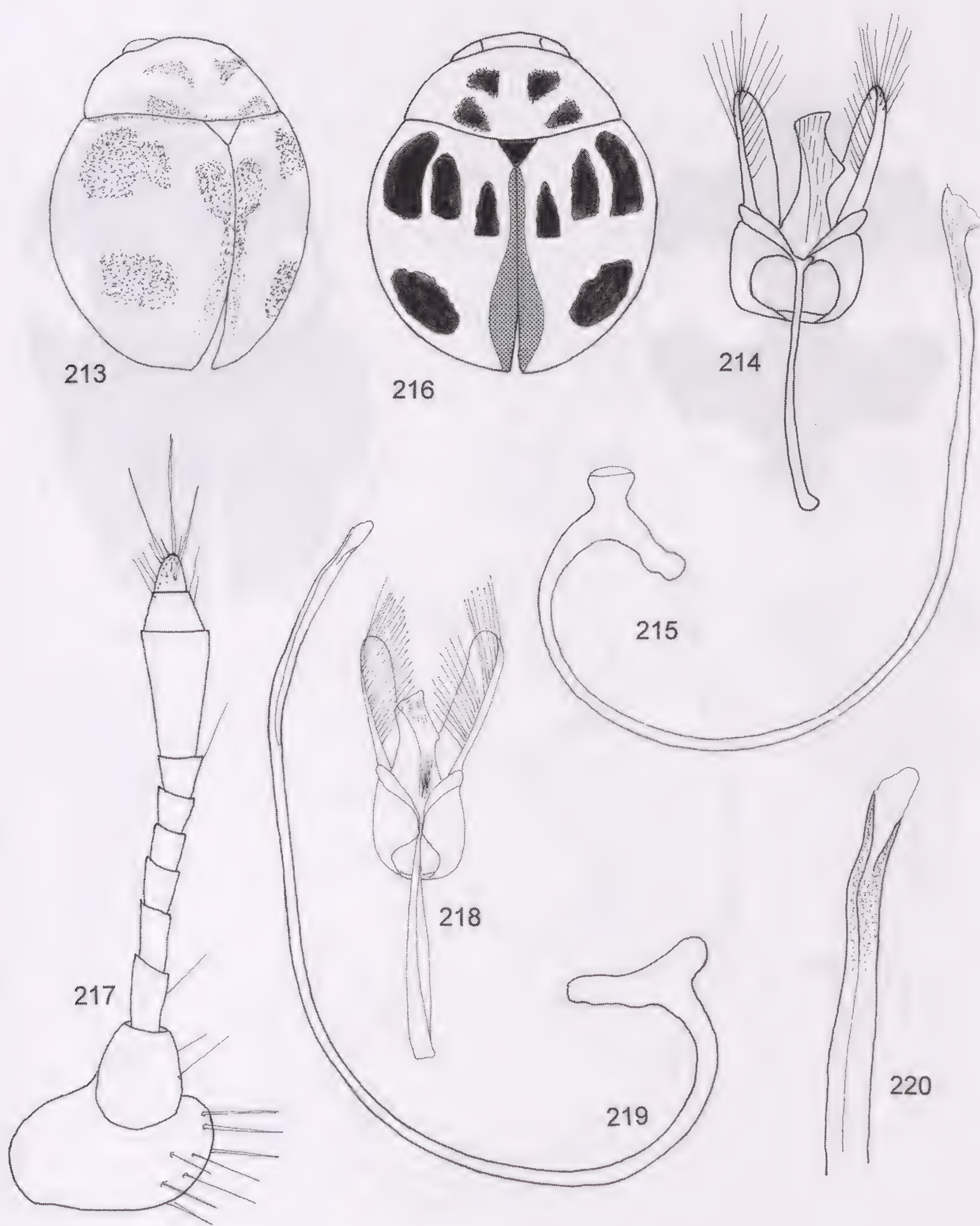
Figs. 189-198 - *Hyperaspis brethesi* structures. 189-193, habitus and variations. 194, antenna. 195, metendosternite. 196-198, male genitalia. 196, phallobase; 197, siphon; 198, enlarged siphonal apex.



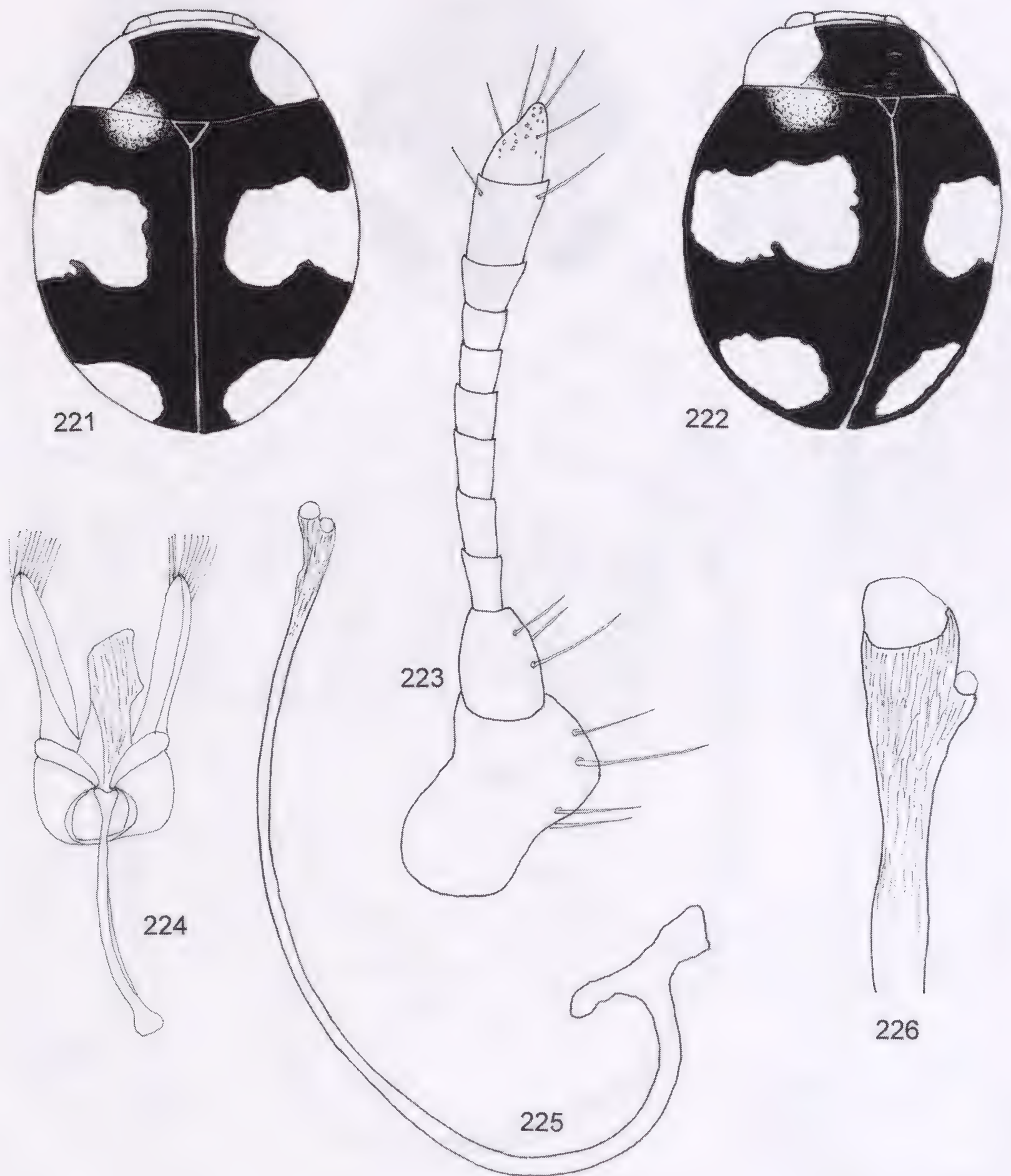
Figs. 199-203 - *Hyperaspis brethesi* female genitalia and *H. rosariensis* habitus and male genitalia. 199, *H. brethesi* female genitalia. 200-203, *H. rosariensis*. 200, habitus. 201-203, male genitalia. 201, phallobase; 202, siphon; 203, enlarged siphonal apex.



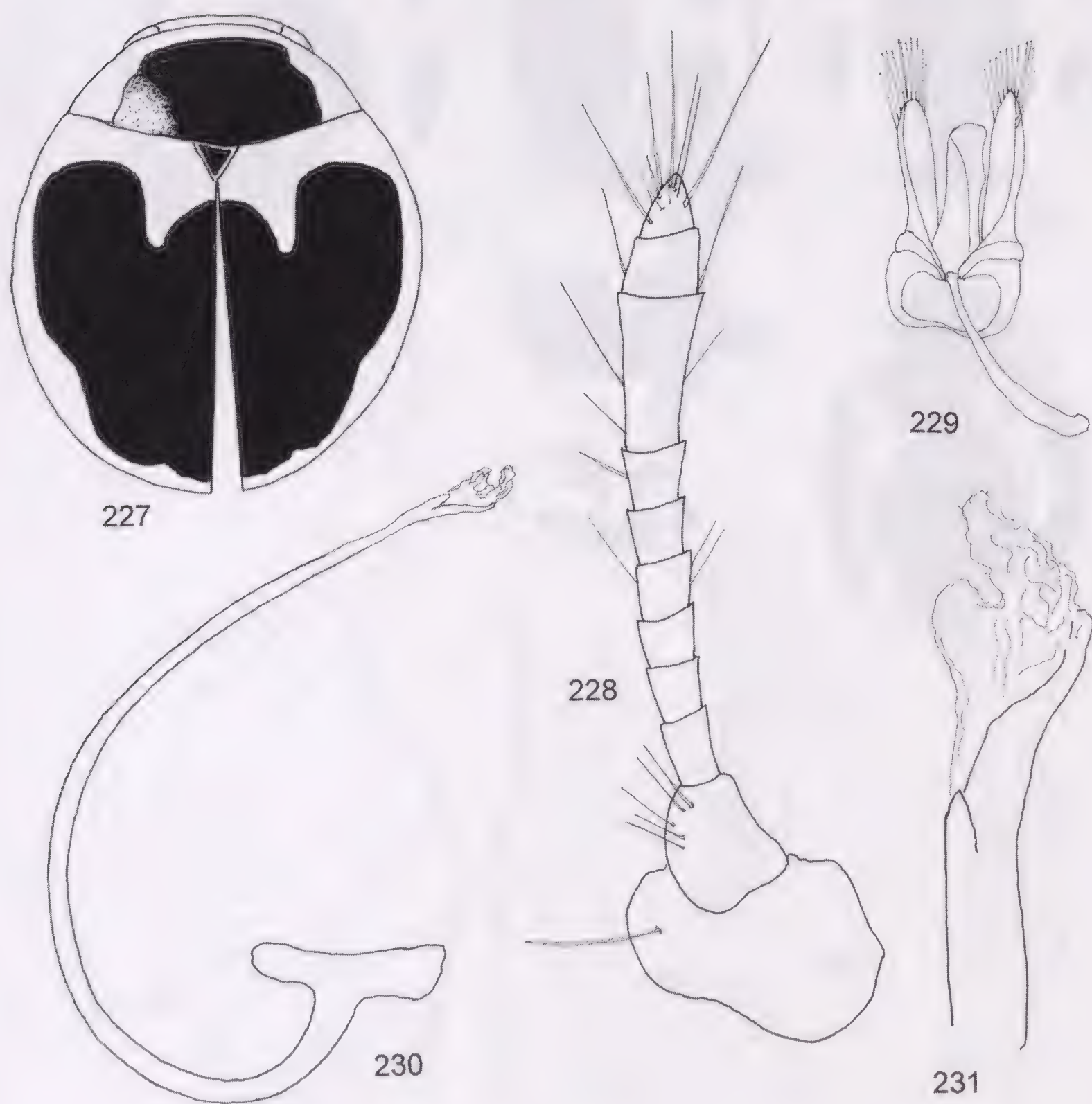
Figs. 204-212 - *Hyperaspis siladesma* and *H. octonotata* habitus and genitalia. 204-207, *H. siladesma*. 204-205, habitus. 206-207, male genitalia. 206, phallobase; 207, siphonal capsule, remainder of siphon lost. 208-212, *H. octonotata*. 208-209, habitus. 210-212, male genitalia. 210, phallobase; 211, siphon; 212, enlarged siphonal apex.



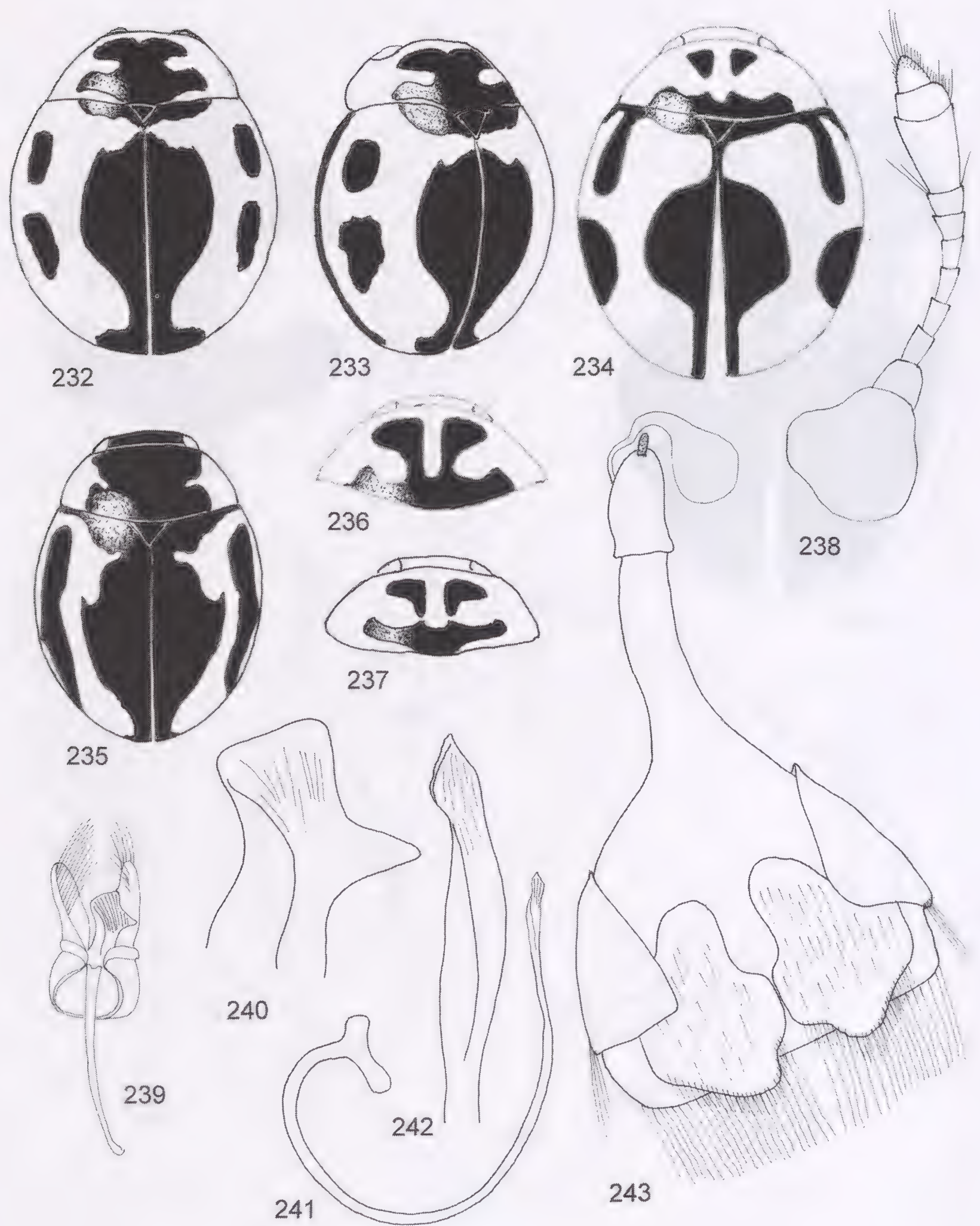
Figs. 213-220 - *Hyperaspis campbelli* and *H. colombiensis* structures. 213-215, *H. campbelli*. 213, habitus. 214-215, male genitalia. 214, phallobase; 215, siphon. 216-220, *H. colombiensis*. 216, habitus. 217, antenna. 218-220, male genitalia. 218, phallobase; 219, siphon; 220, enlarged siphonal apex.



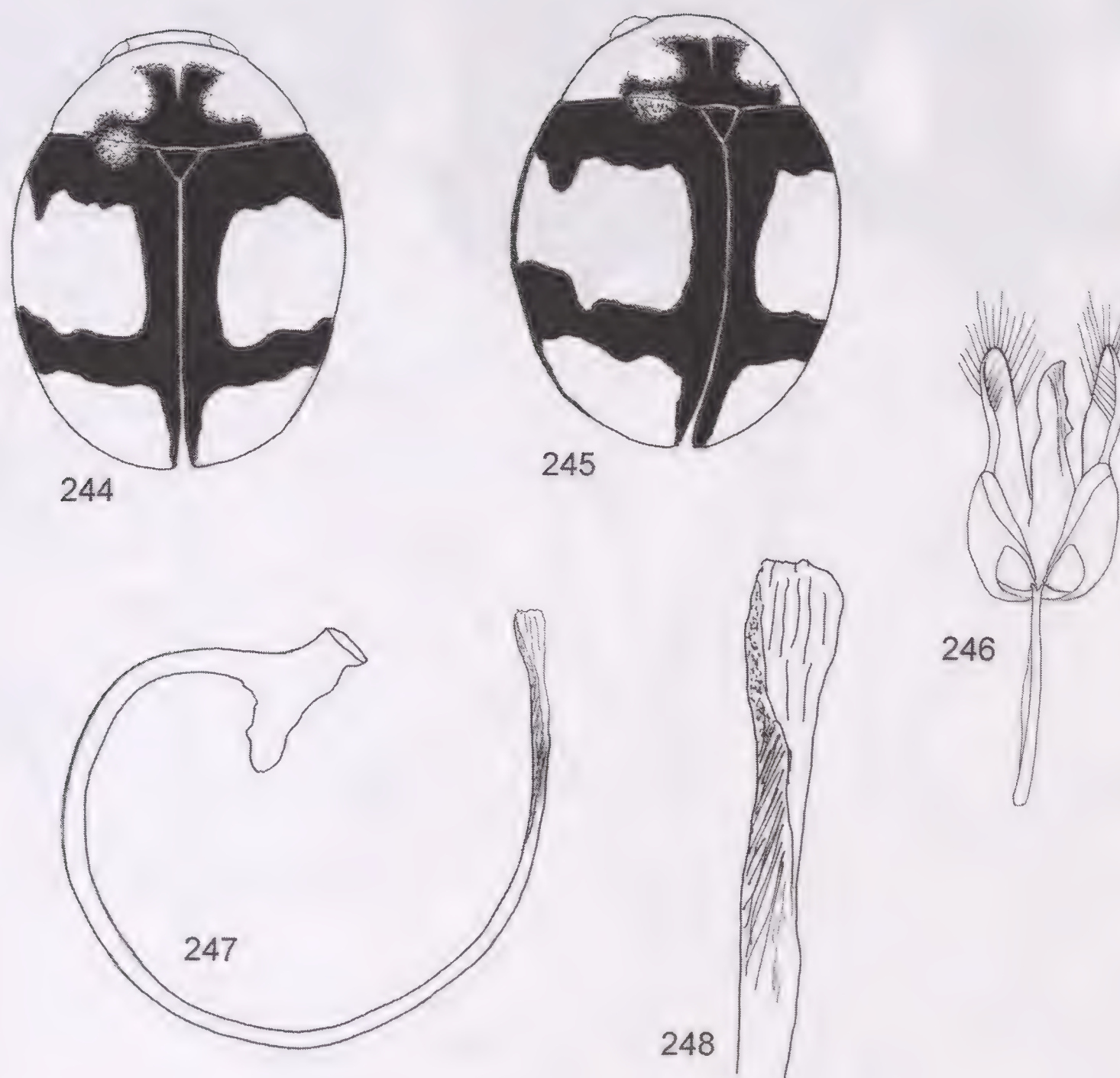
Figs. 221-226 - *Hyperaspis dissidens* structures. 221-222, habitus. 223, antenna. 224-226, male genitalia. 224, phallobase; 225, siphon; 226, enlarged siphonal apex.



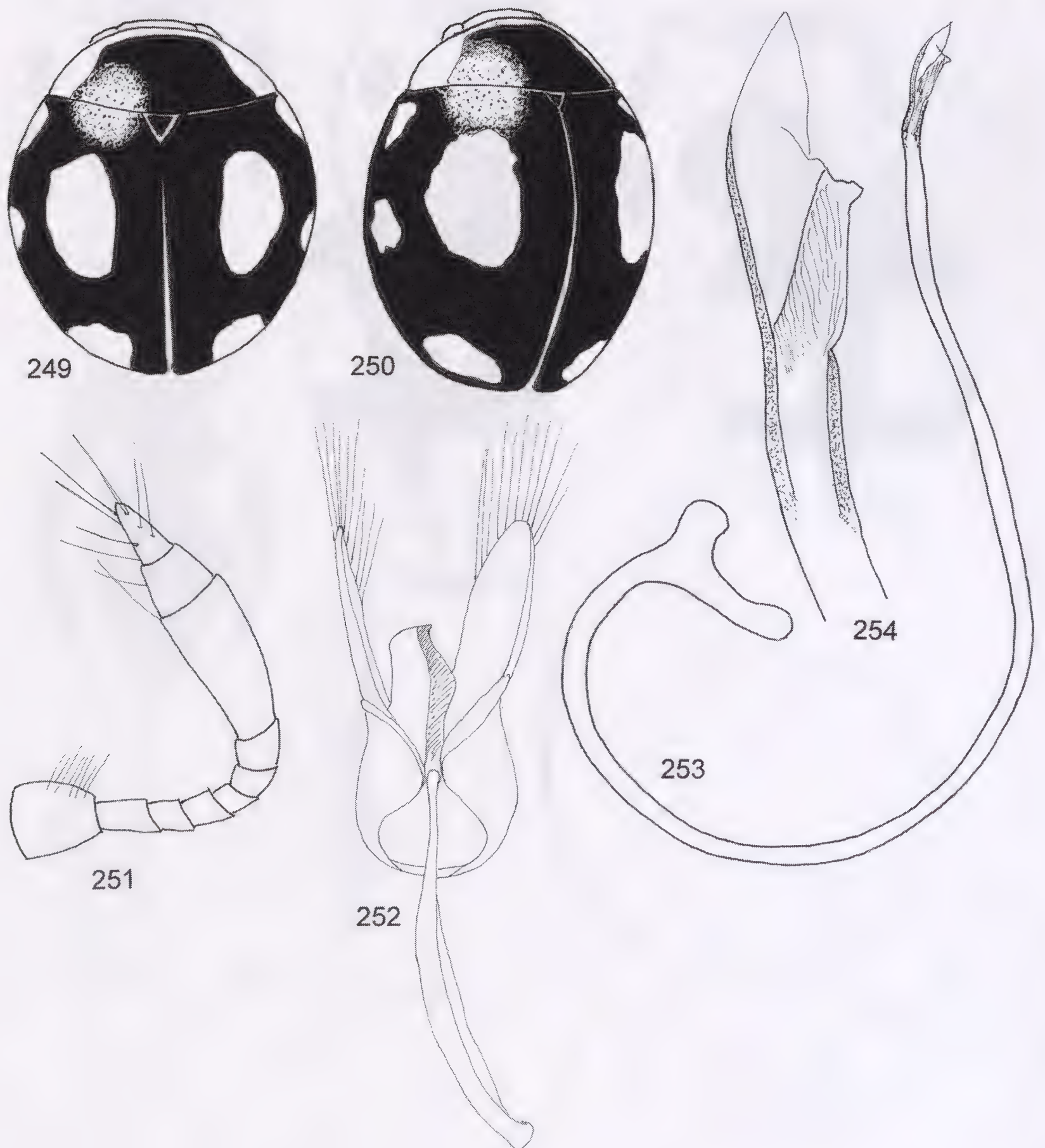
Figs. 227-231 - *Hyperaspis uninotata* structures. 227, habitus. 228, antenna. 229-231, male genitalia. 229, phallobase; 230, siphon; 231, enlarged siphonal apex.



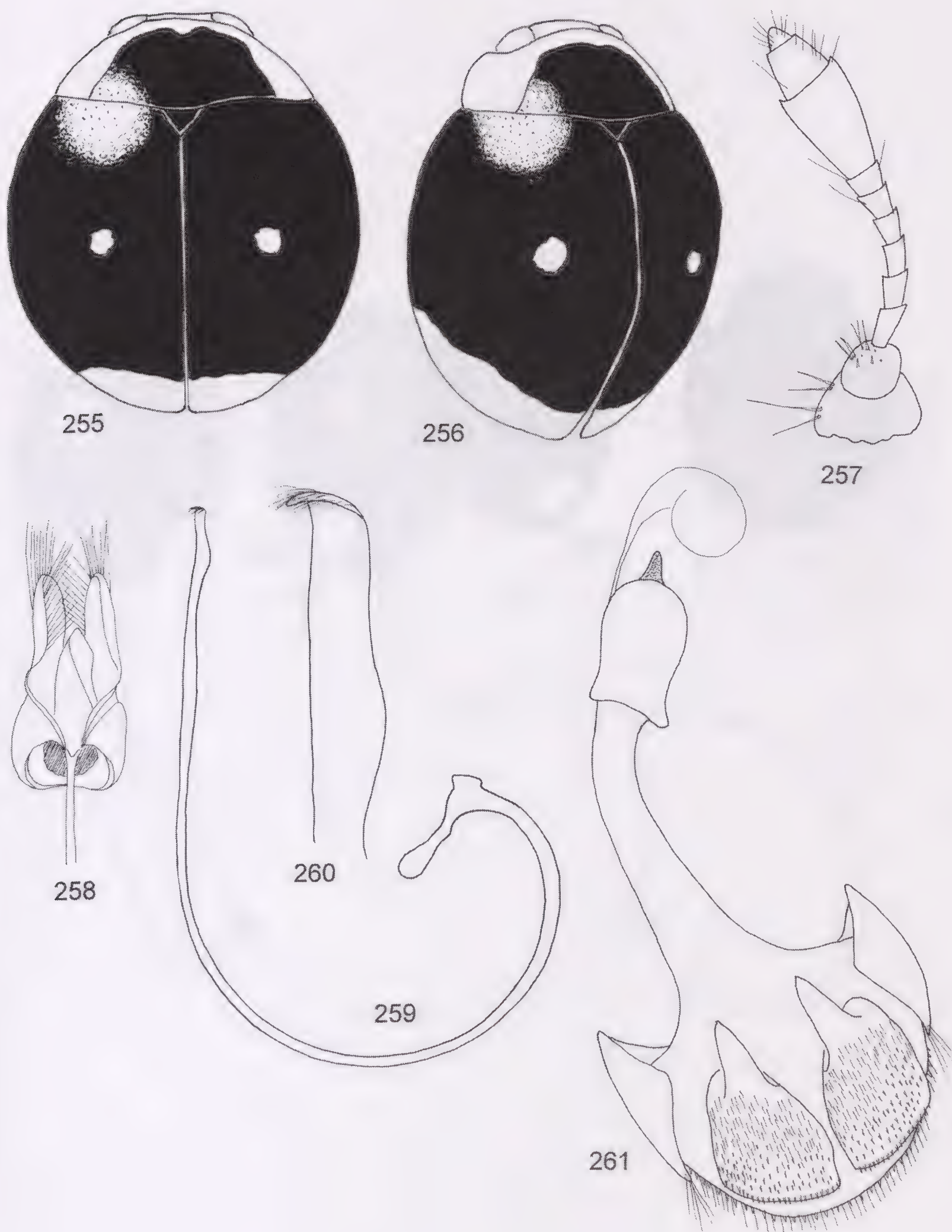
Figs. 232-243 - *Hyperaspis onerata* structures. 232-235, habitus and variations. 236-237, pronotal variations. 238, antenna. 239-242, male genitalia. 239, phallobase; 240, enlarged basal lobe; 241, siphon; 242, enlarged siphonal apex. 243, female genitalia.



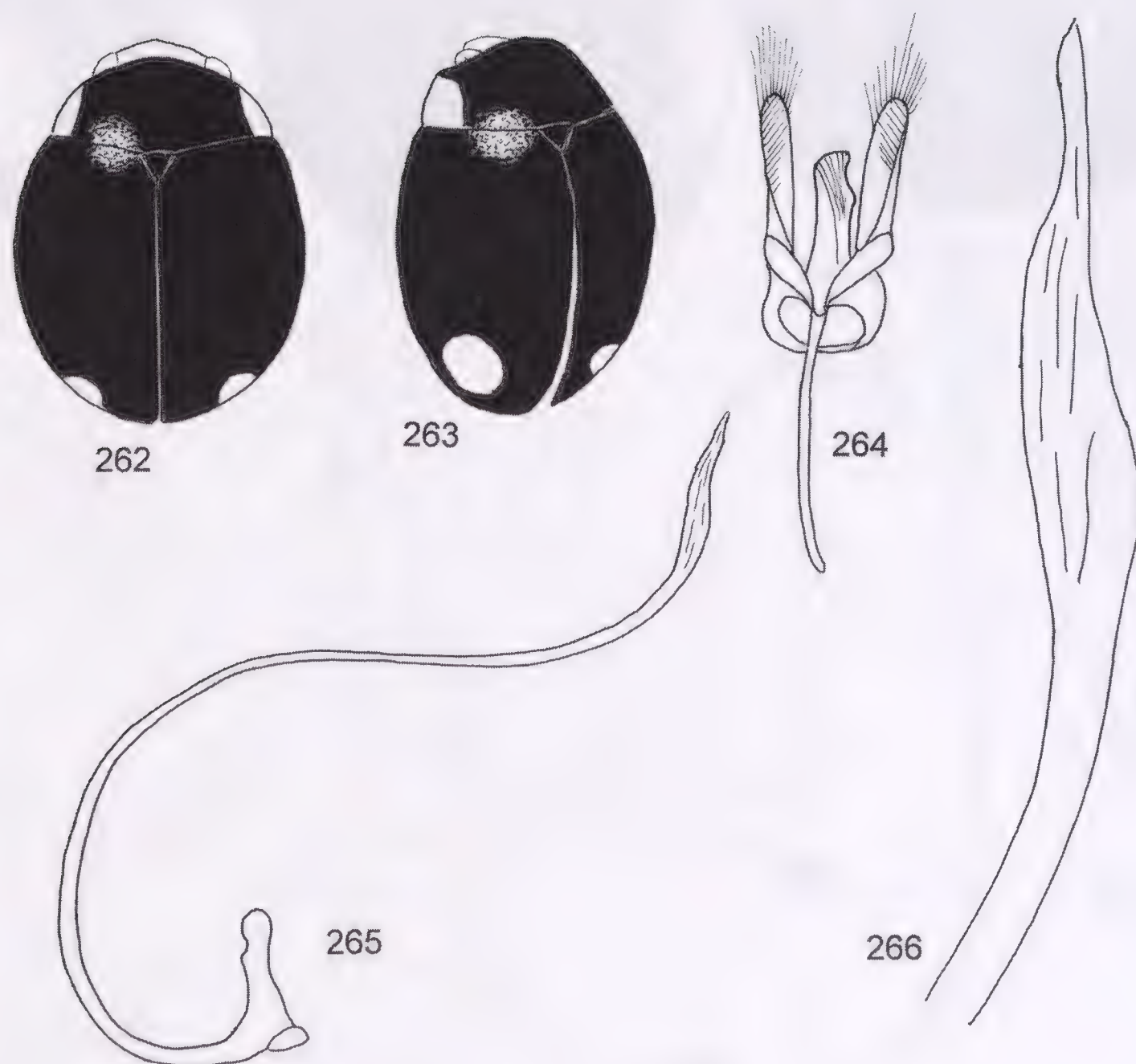
Figs. 244-248 - *Hyperaspis bicruciata* habitus and male genitalia. 244-245, habitus. 246-248, male genitalia. 246, phallobase; 247, siphon; 248, enlarged siphonal apex.



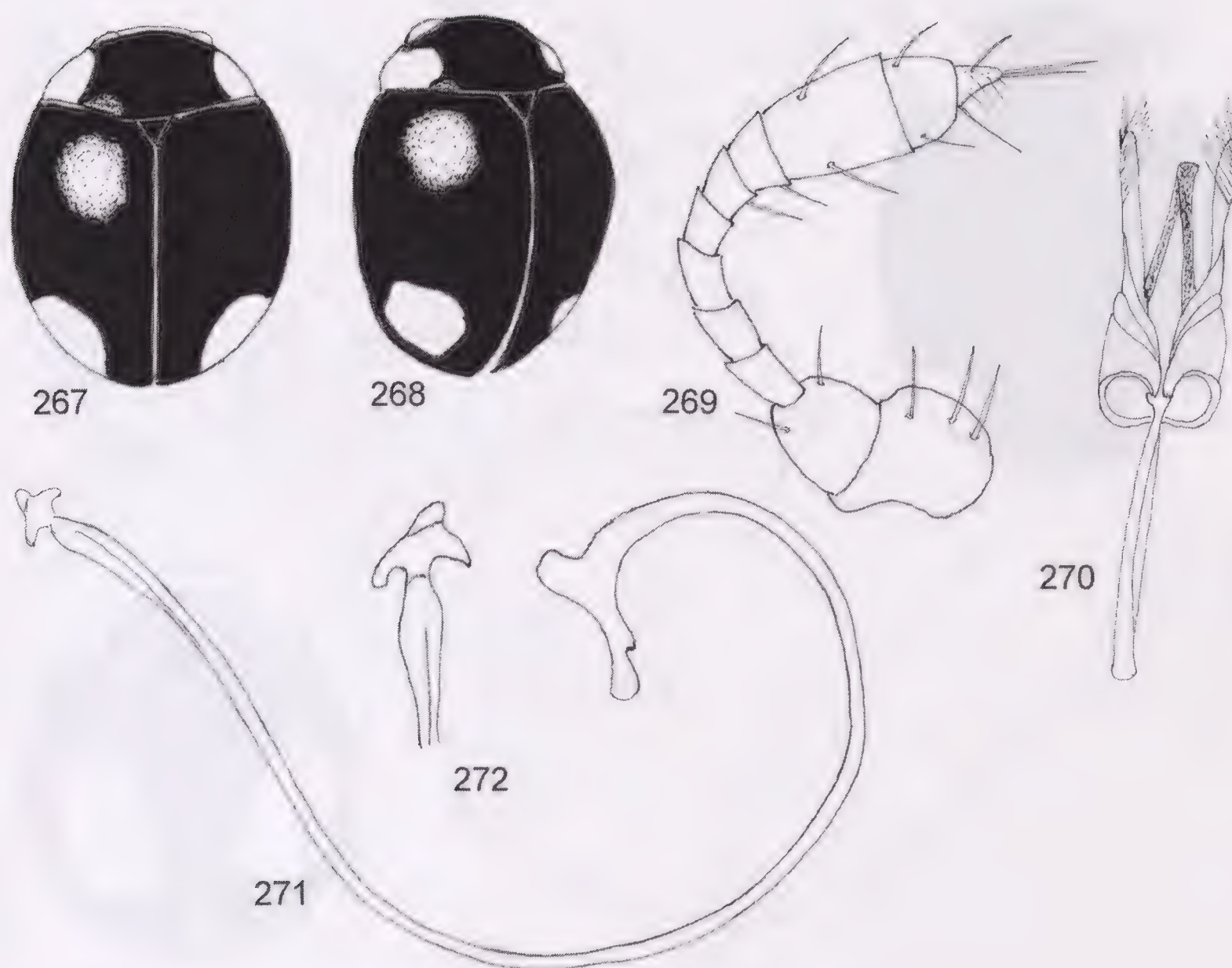
Figs. 249-254 - *Hyperaspis joannae* structures. 249-250, habitus. 251, antenna, basal article missing. 252-254, male genitalia. 252, phallobase; 253, siphon; 254, enlarged siphonal apex.



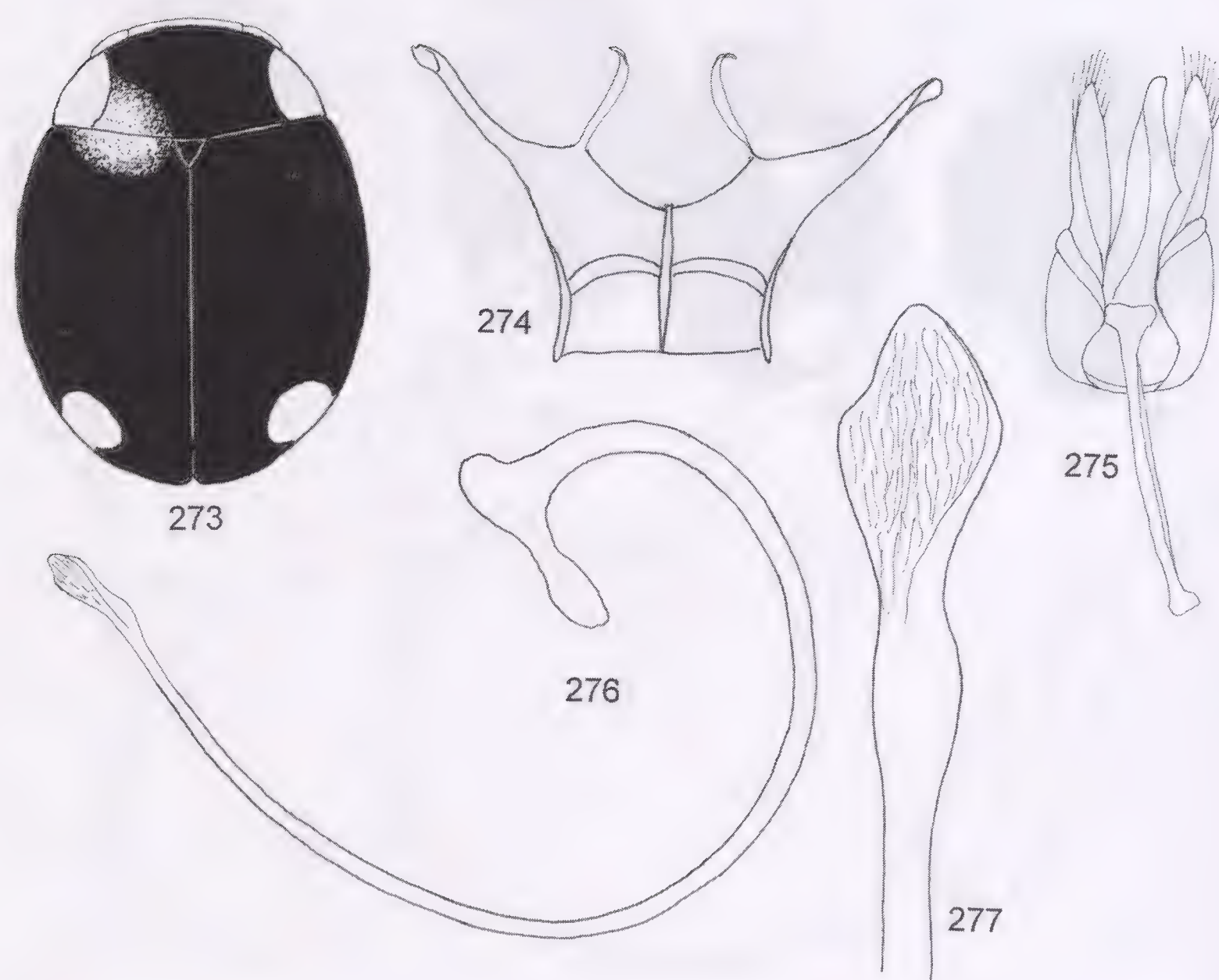
Figs. 255-261 - *Hyperaspis albopunctata* structures. 255-256, habitus. 257, antenna. 258-260, male genitalia. 258, phallobase; 259, siphon; 260, enlarged siphonal apex. 261, female genitalia.



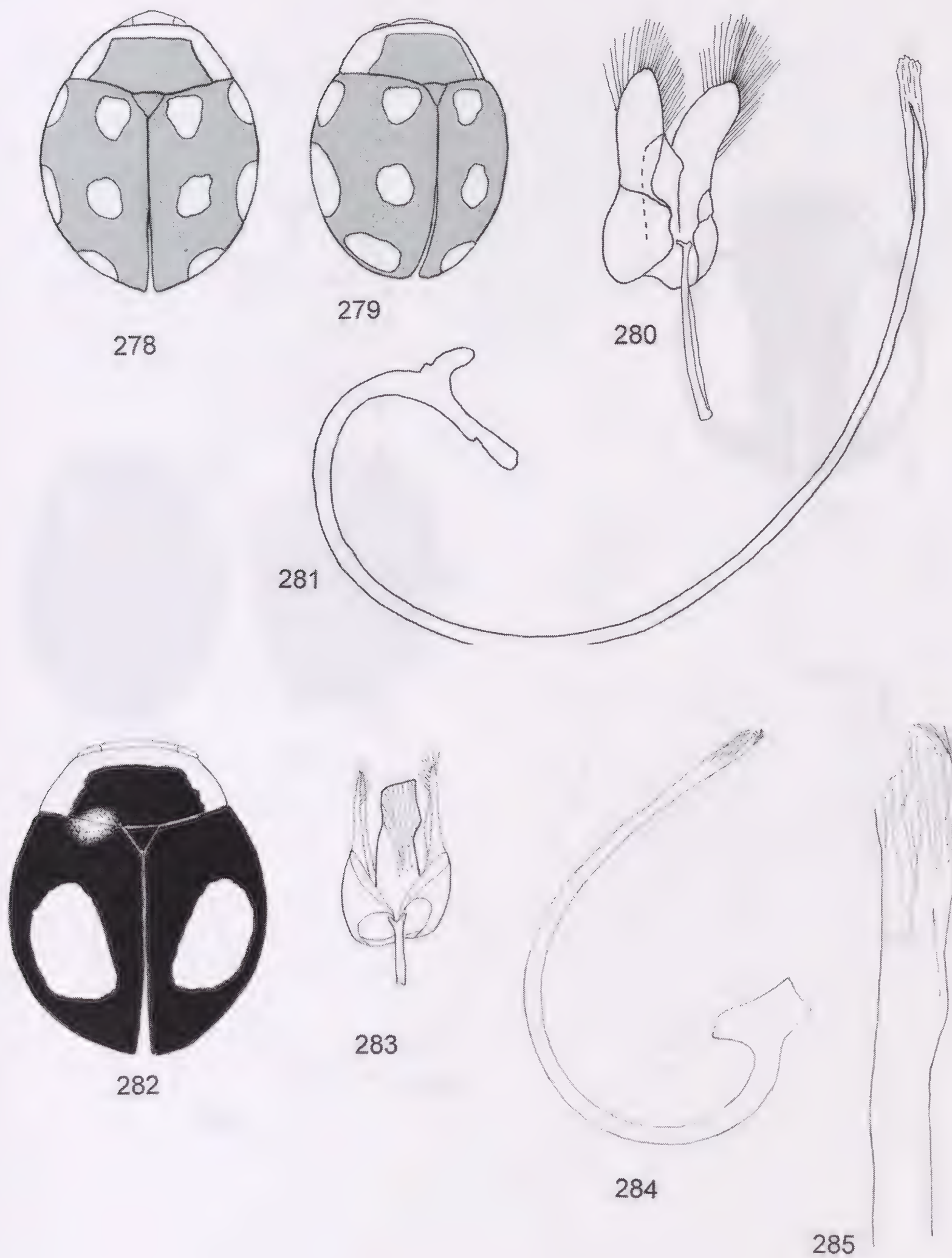
Figs. 262-266 - *Hyperaspis apicaspis* habitus and male genitalia. 262-263, habitus. 264-266, male genitalia. 264, phallobase; 265, siphon; 266, enlarged siphonal apex.



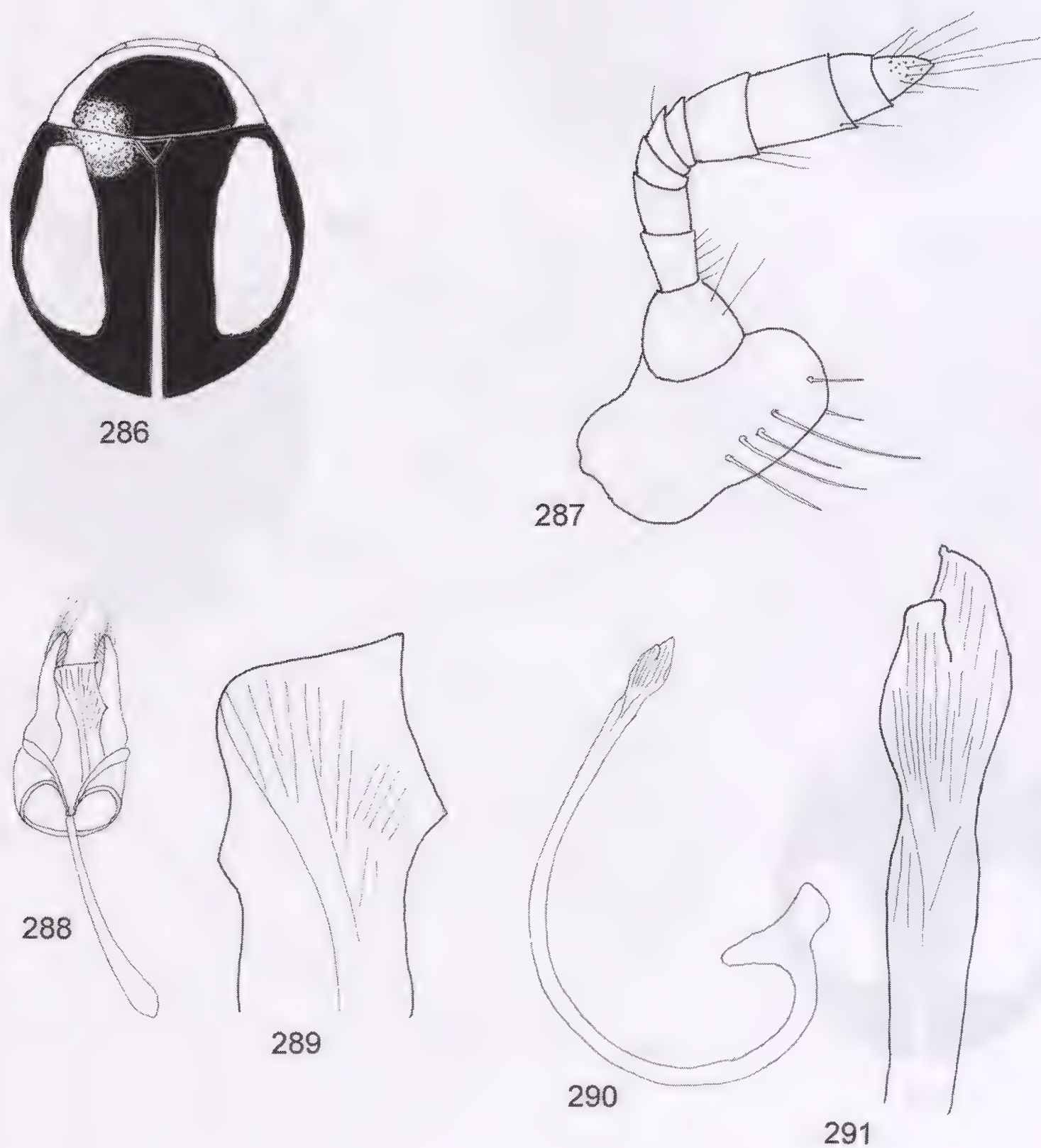
Figs. 267-272 - *Hyperaspis delicata* structures. 267-268, habitus. 269, antenna. 270-272, male genitalia. 270, phallobase; 271, siphon; 272, enlarged siphonal apex.



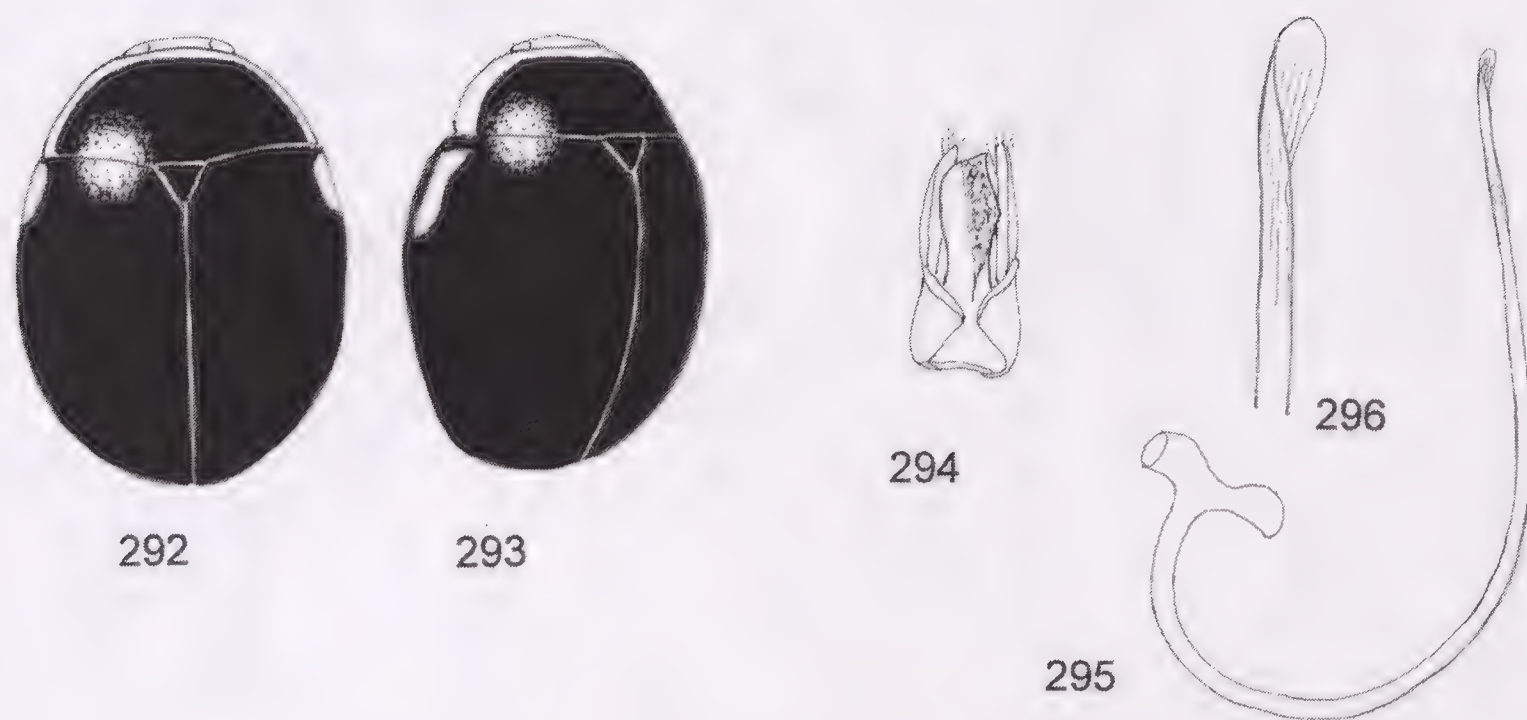
Figs. 273-277 - *Hyperaspis mimica* structures. 273, habitus. 274, metendosternite. 275-277, male genitalia. 275, phallobase; 276, siphon; 277, enlarged siphonal apex.



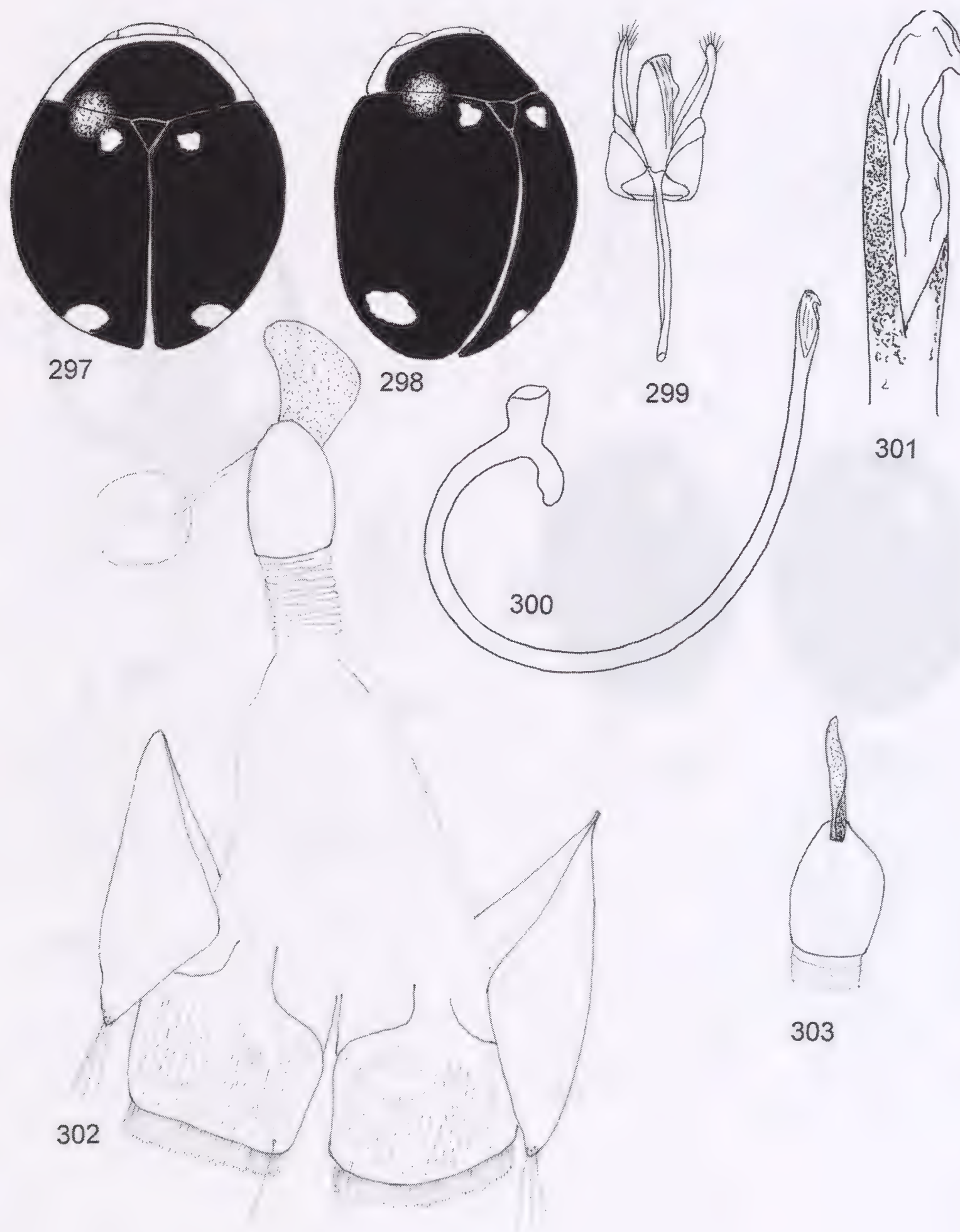
Figs. 278-285 - *Hyperaspis laterimacula* and *H. howdeni* habitus and male genitalia. 278-281, *H. laterimacula*. 278-279, habitus. 280-281, male genitalia. 280, phallobase; 281, siphon. 282-285 *H. howdeni*. 282, habitus. 283-285, male genitalia. 283, phallobase; 284, siphon; 285, enlarged siphonal apex.



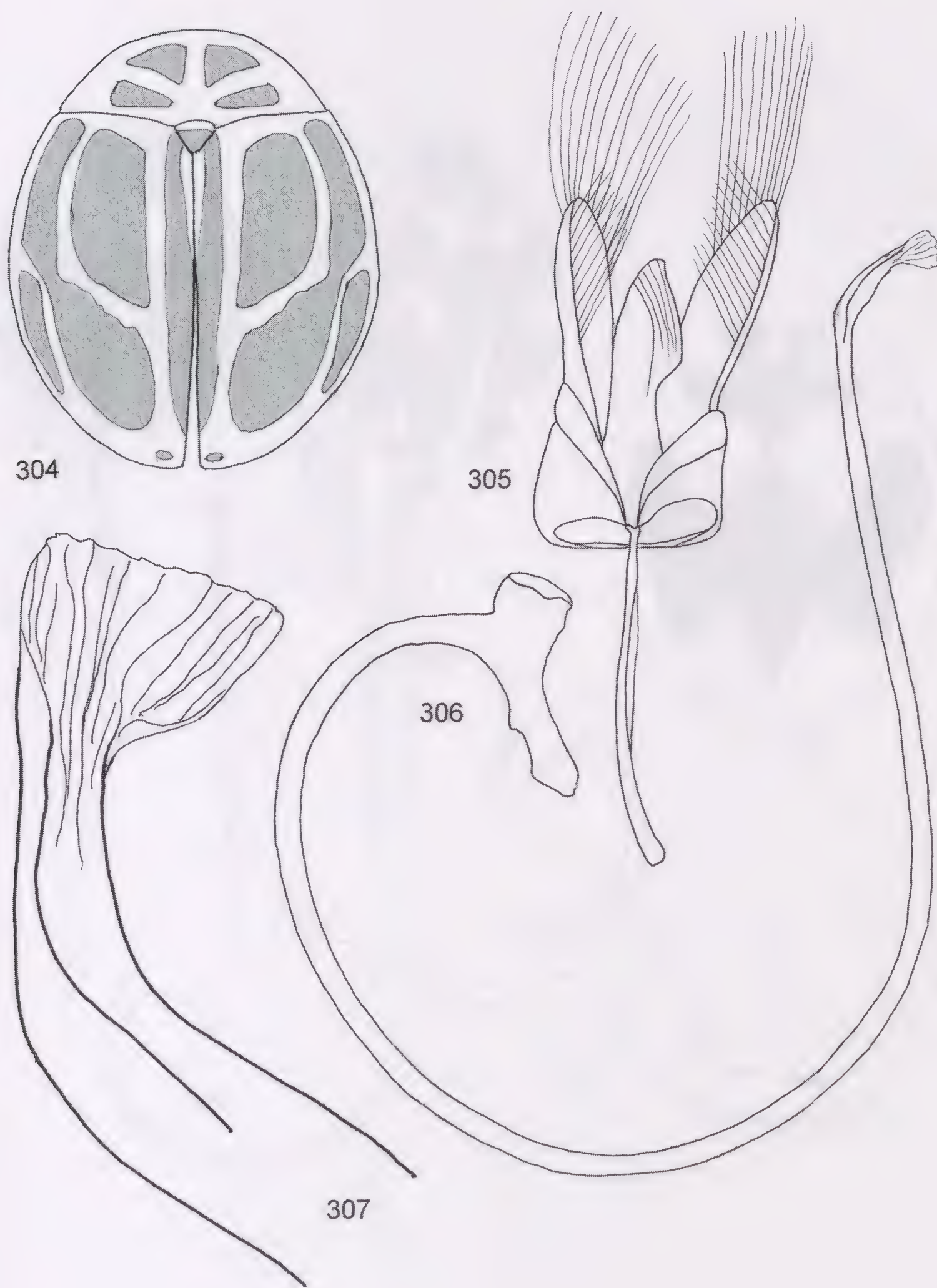
Figs. 286-291 - *Hyperaspis chocoi* structures. 286, habitus. 287, antenna. 288-291, male genitalia. 288, phallobase; 289, enlarged basal lobe; 290, siphon; 291, enlarged siphonal apex.



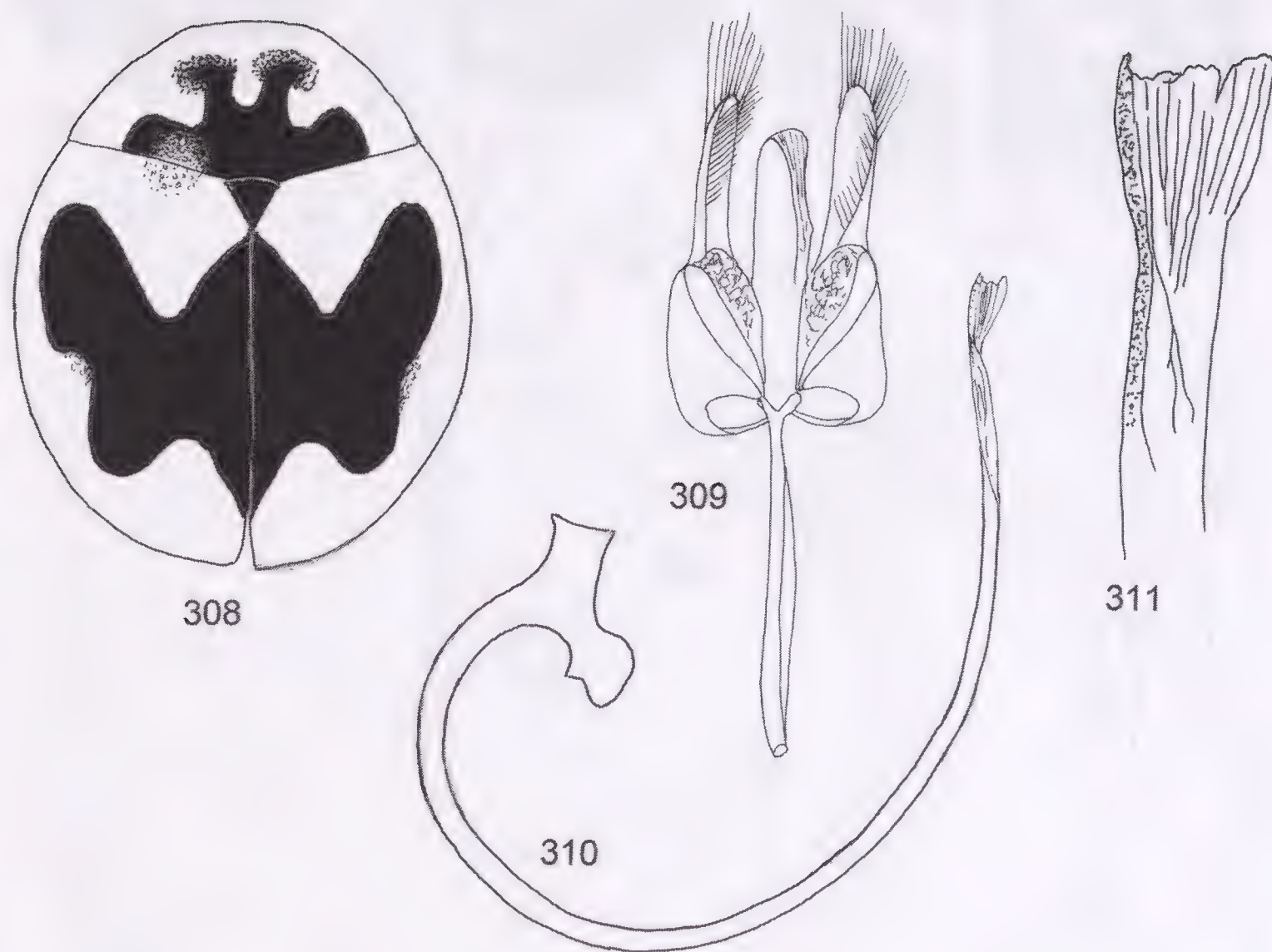
Figs. 292-296 - *Hyperaspis atra* habitus and male genitalia. 292-293, habitus. 294-296, male genitalia. 294, phallobase; 295, siphon; 296, enlarged siphonal apex.



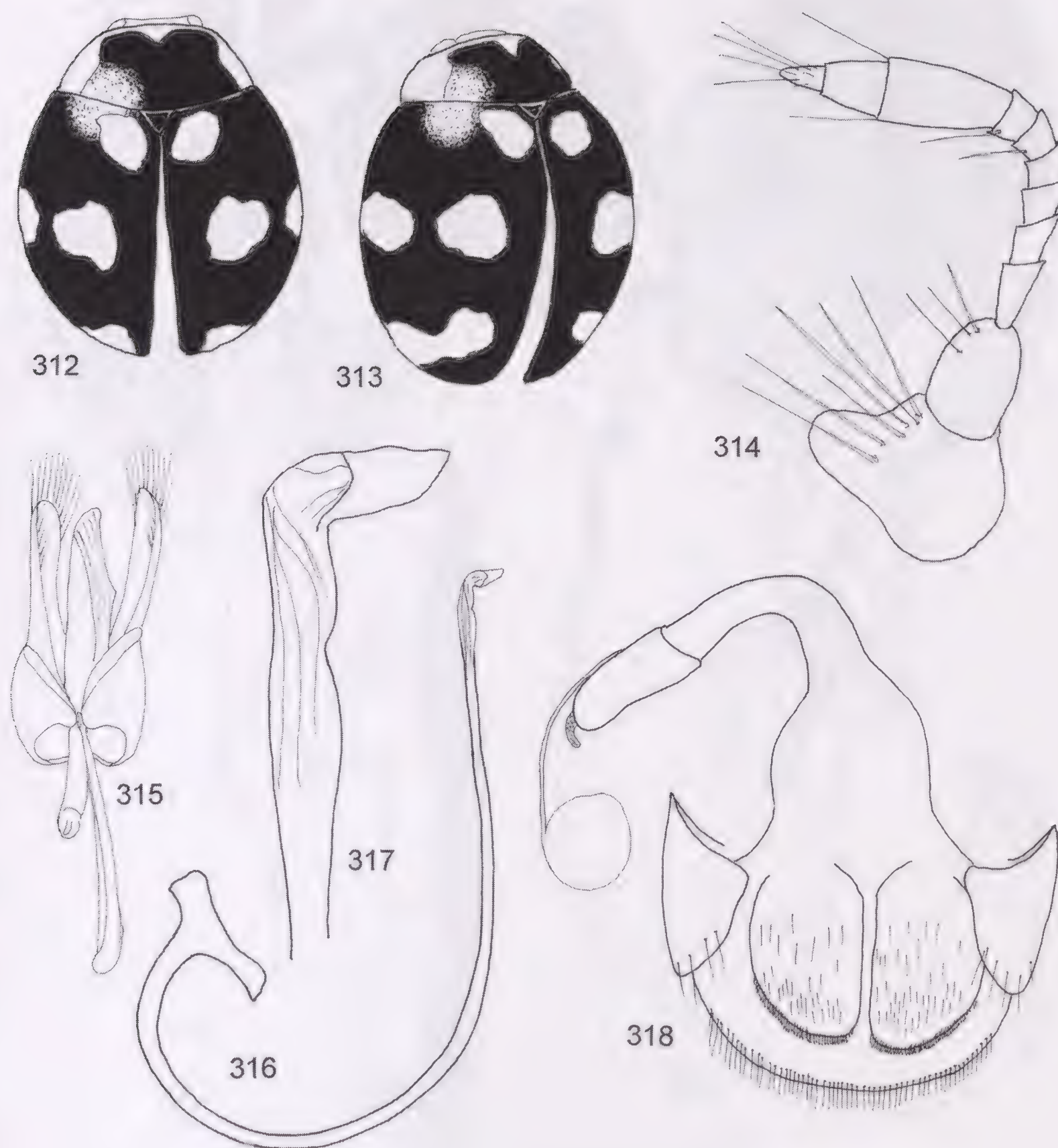
Figs. 297-303 - *Hyperaspis recordata* habitus and genitalia. 297-298, habitus. 299-301, male genitalia. 299, phallobase; 300, siphon; 301, enlarged siphonal apex. 302-303, female genitalia. 302, complete genitalia; 303, basal unit, ventral view.



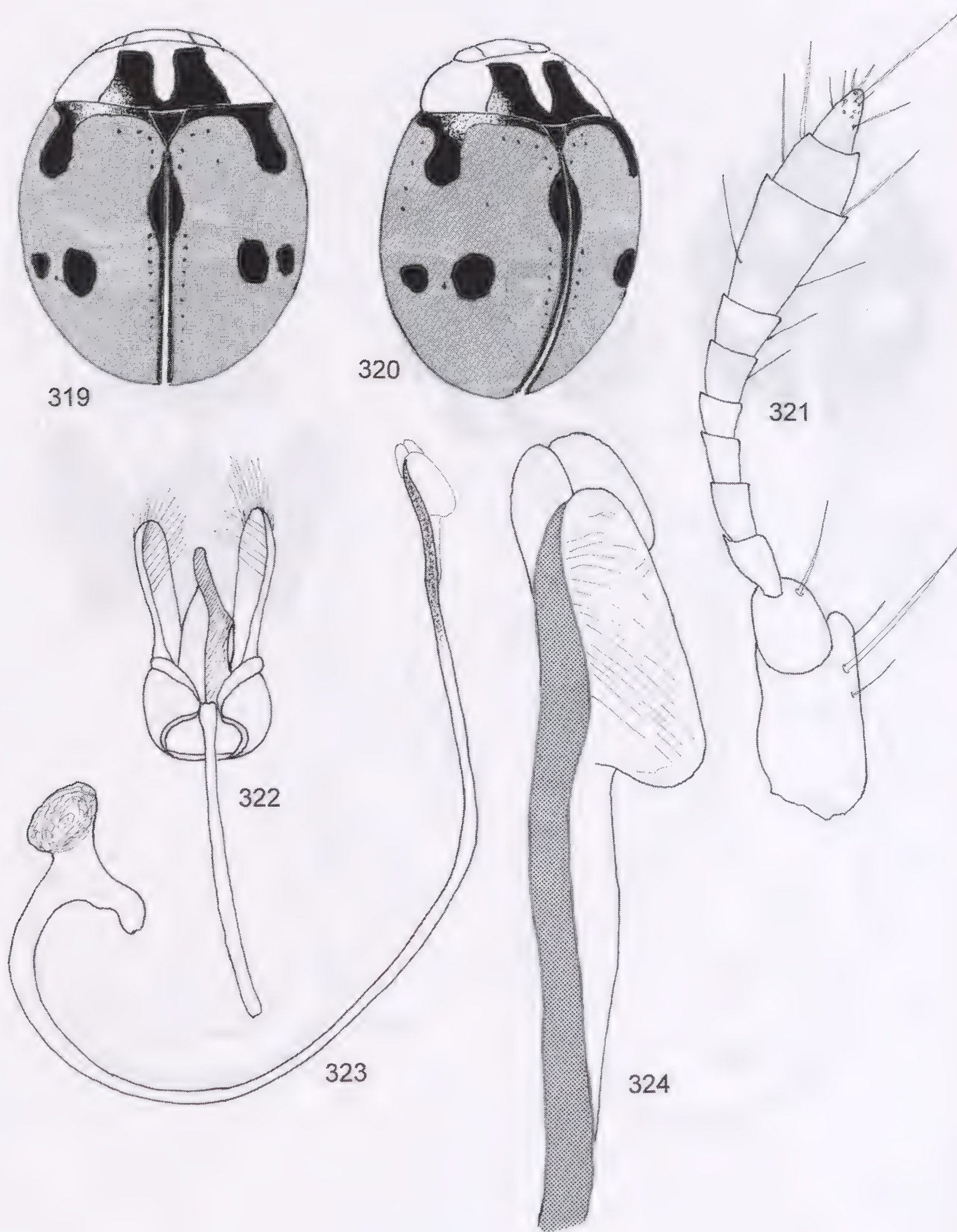
Figs. 304-307 - *Hyperaspis eupaleoides* habitus and male genitalia. 304, habitus. 305-307, male genitalia. 305, phallobase; 306, siphon; 307, enlarged siphonal apex.



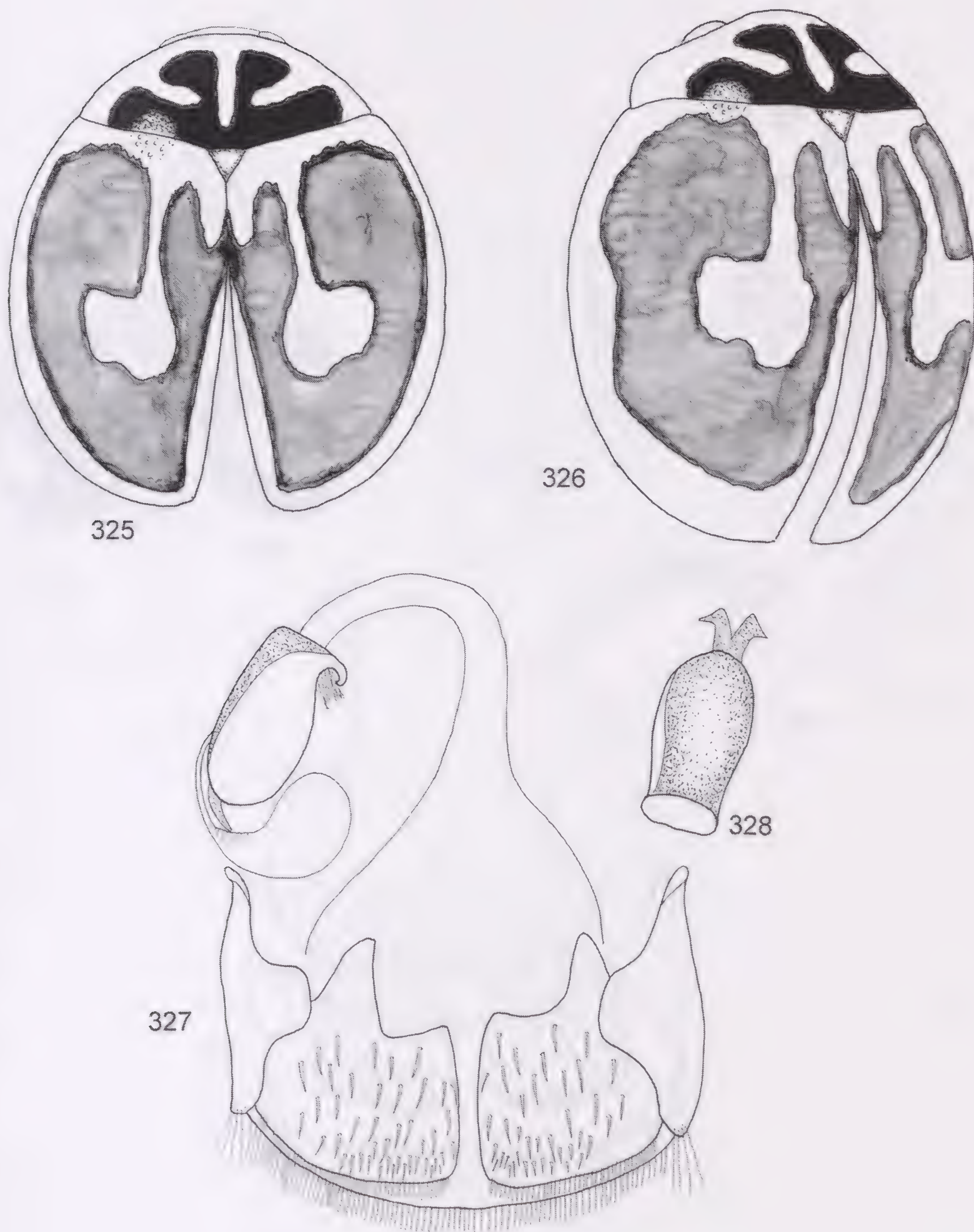
Figs. 308-311 - *Hyperaspis mariposa* habitus and male genitalia. 308, habitus. 309-311, male genitalia. 309, phallobase; 310, siphon; 311, enlarged siphonal apex.



Figs. 312-318 - *Hyperaspis simlaensis* structures. 312-313, habitus. 314, antenna. 315-317, male genitalia. 315, phallobase; 316, siphon; 317, enlarged siphonal apex. 318, female genitalia.



Figs. 319-324 - *Hyperaspis lindae* structures. 319-320, habitus. 321, antenna. 322-324, male genitalia. 322-phallobase; 323, siphon; 324, enlarged siphonal apex.



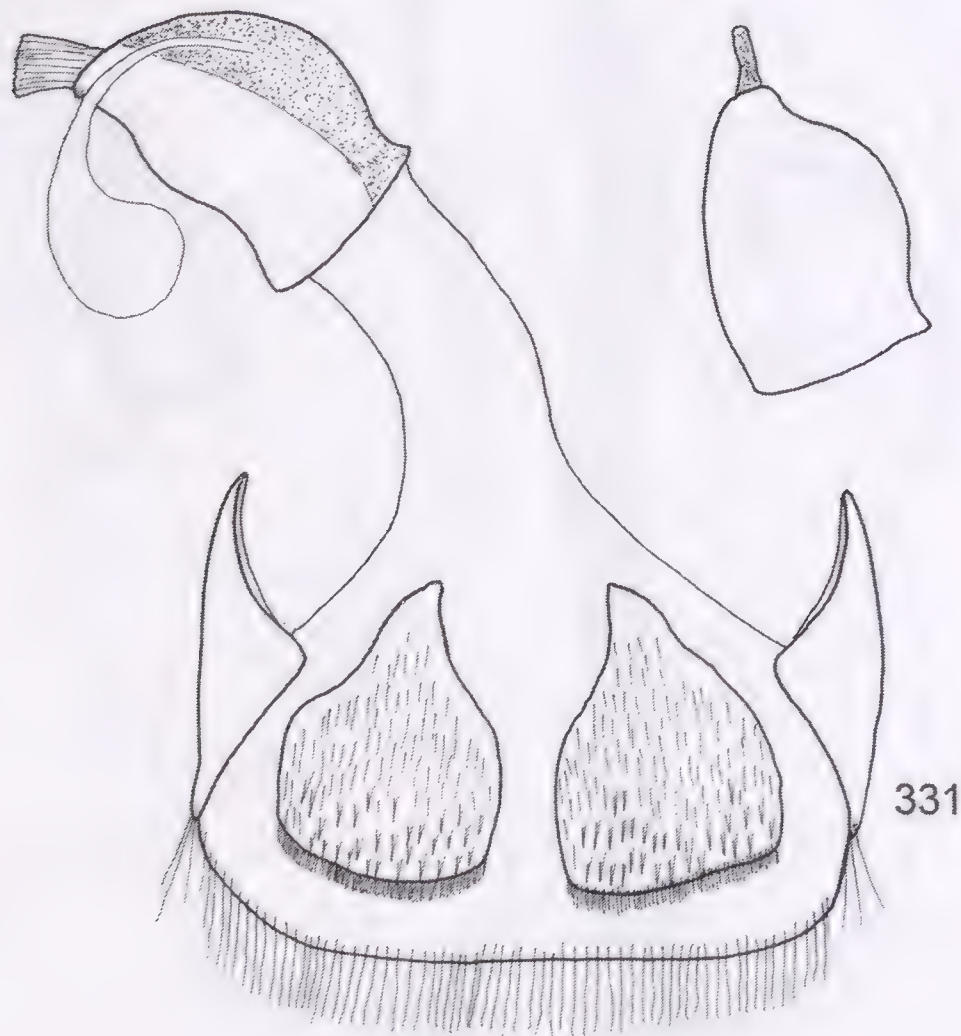
Figs. 325-328 - *Hyperaspis c-nigrum* habitus and female genitalia. 325-326, habitus. 327-328, female genitalia. 327, complete genitalia; 328, lateral view of basal unit.



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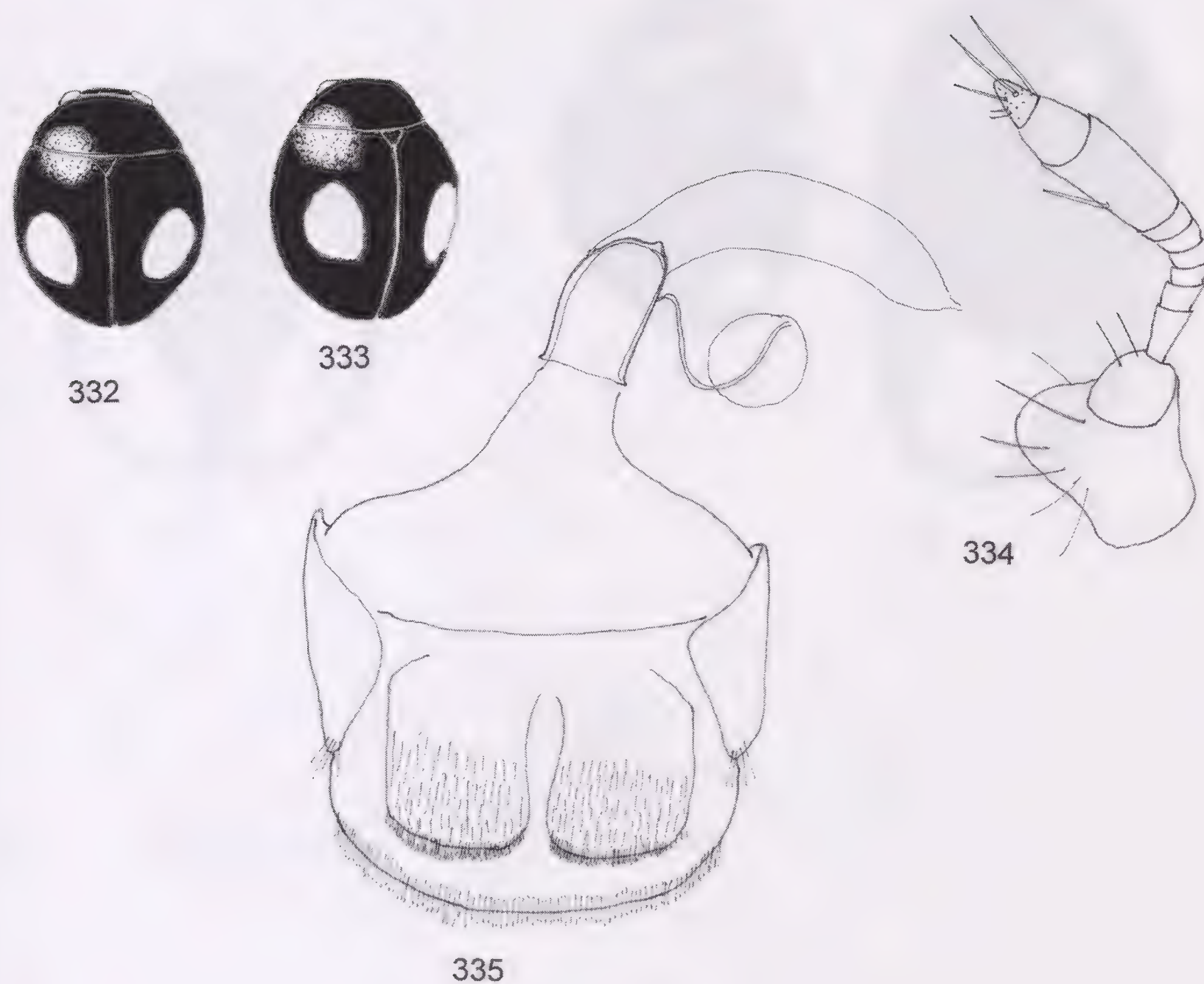


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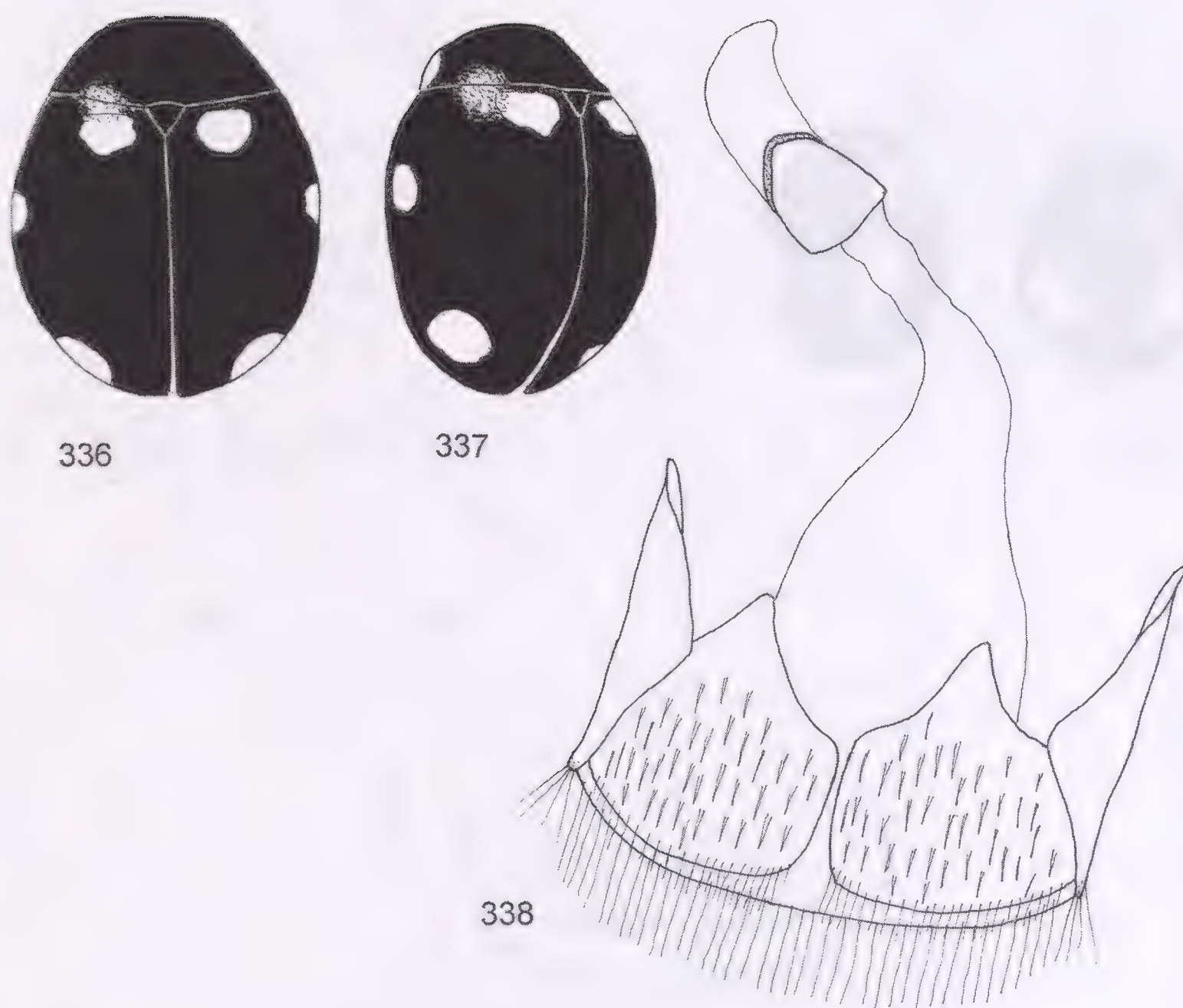


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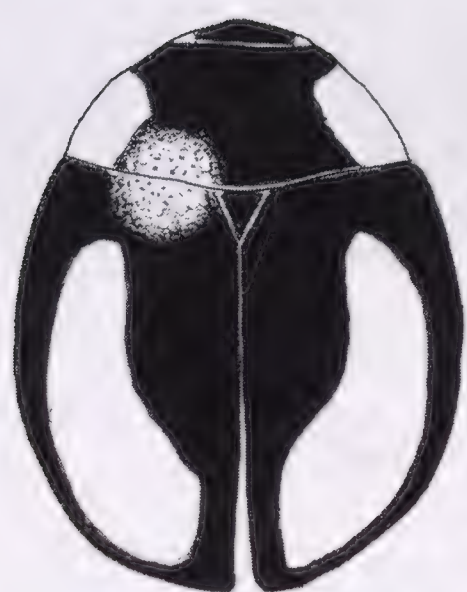
Figs. 329-331 - *Hyperaspis sagittata* habitus and female genitalia. 329-330, habitus. 331, complete female genitalia and ventral view of basal unit.



Figs. 332-325 - *Hyperaspis guilloryi* structures. 332-333, habitus. 334, antenna. 335, female genitalia.



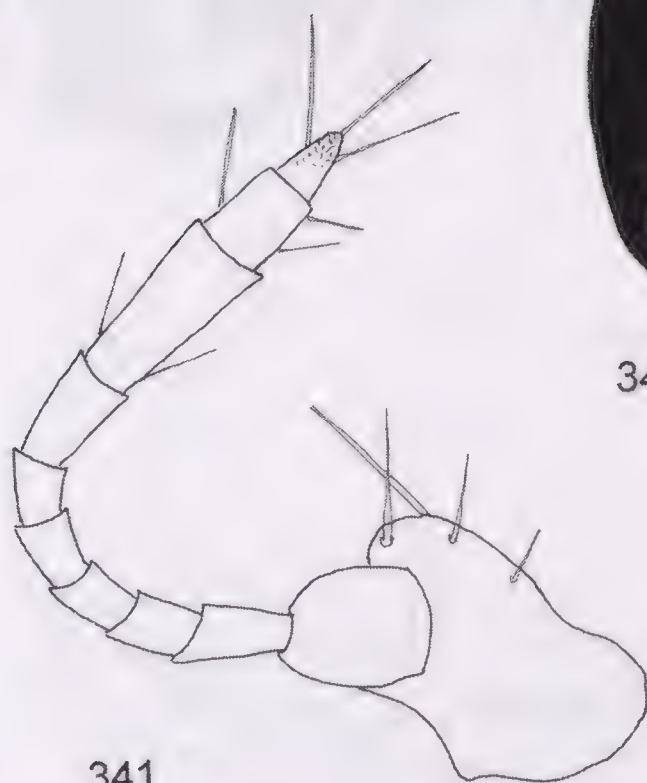
Figs. 336-338 - *Hyperaspis pseudopavida* habitus and female genitalia.
336-337, habitus. 338, female genitalia.



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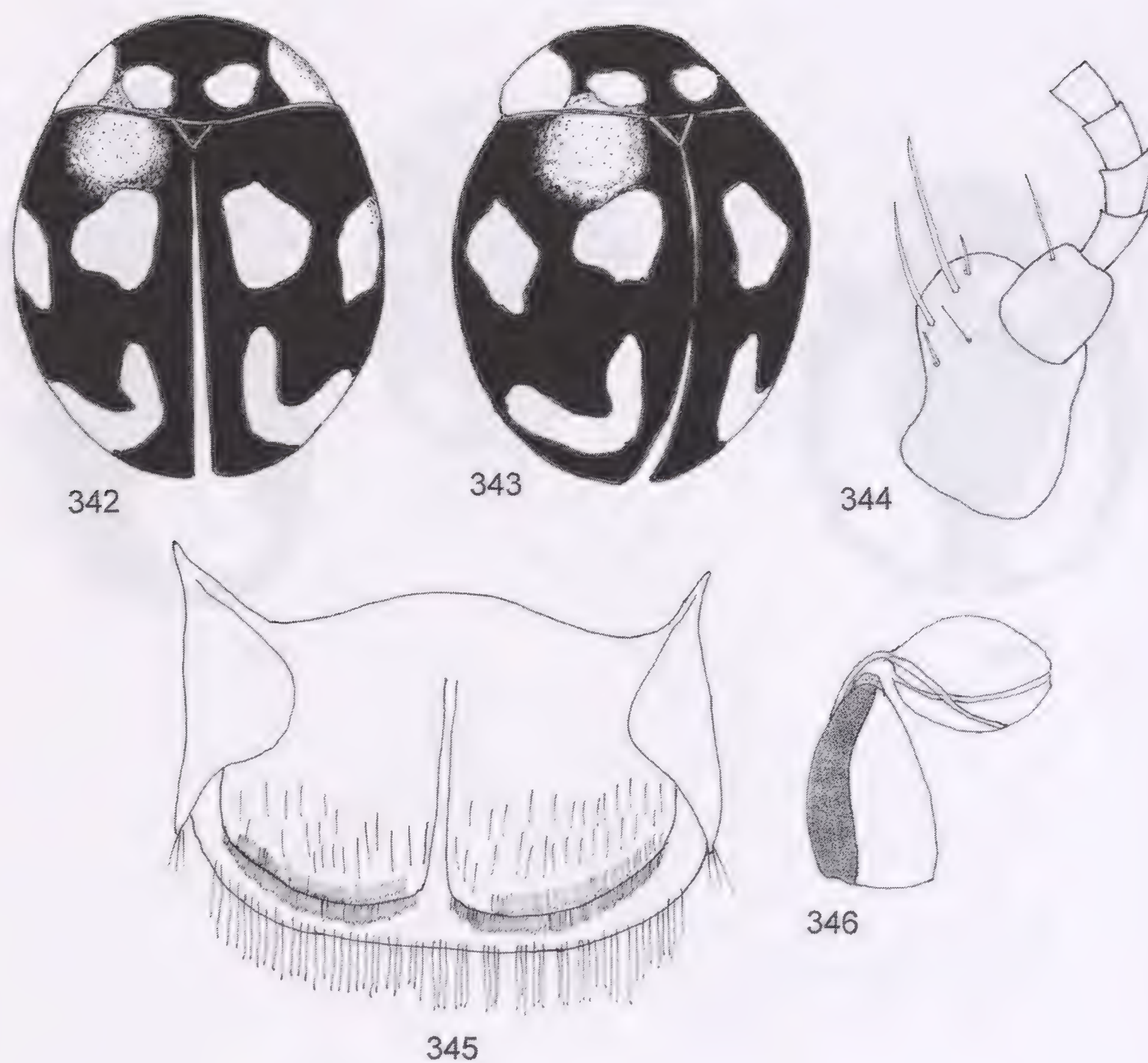


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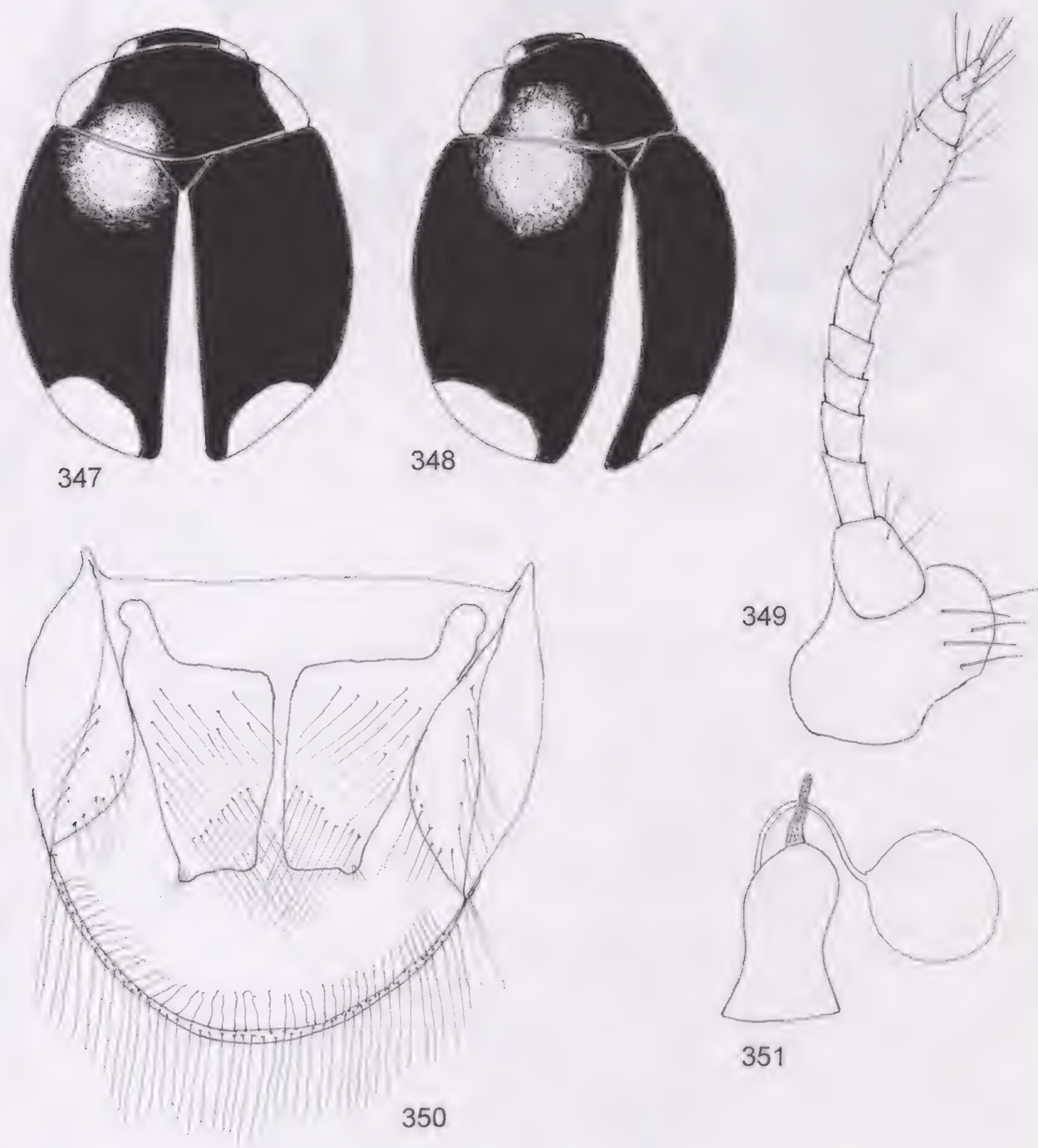


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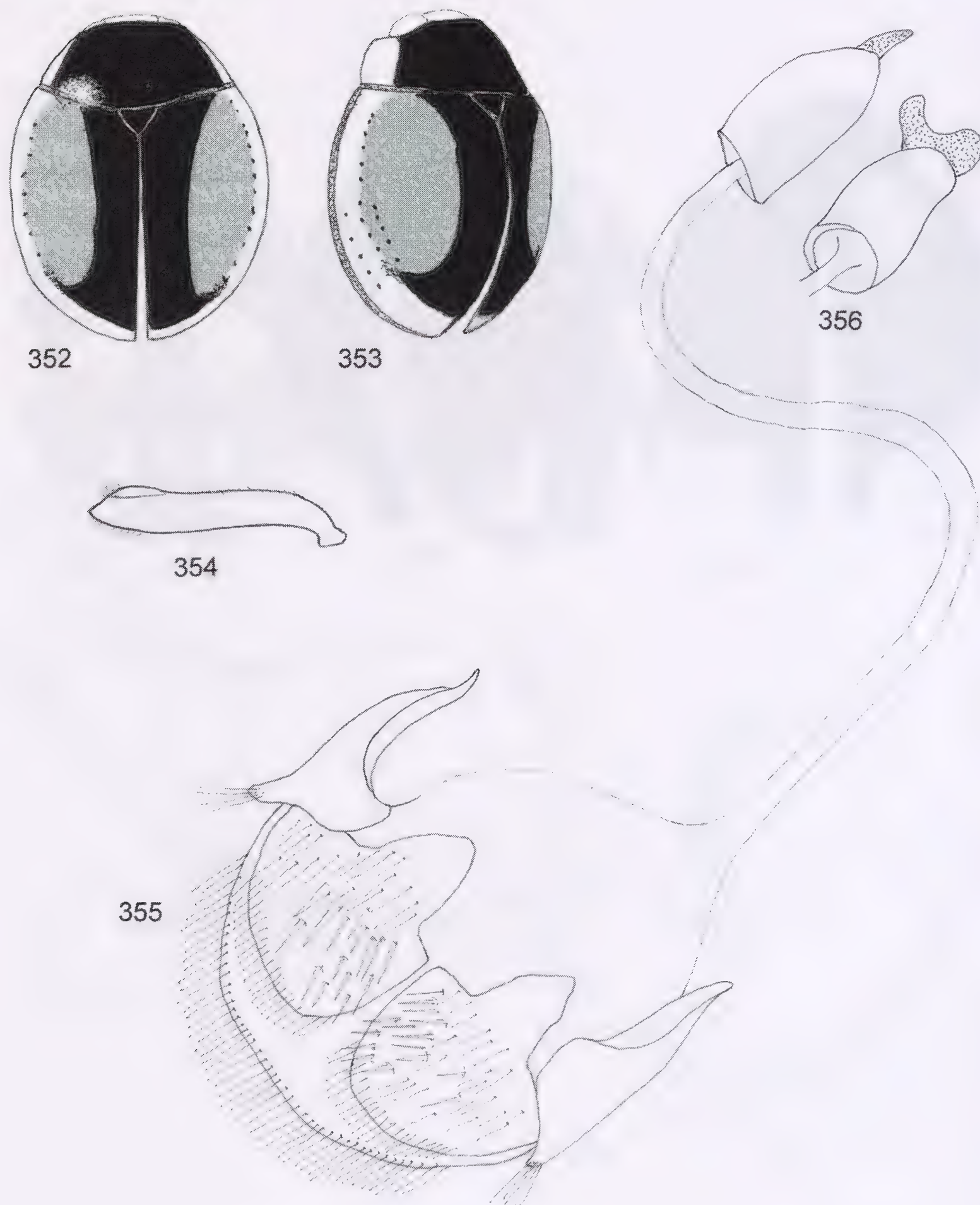
Figs. 339-341 - *Hyperaspis istmina* habitus and antenna. 339-340, habitus.
341, antenna.



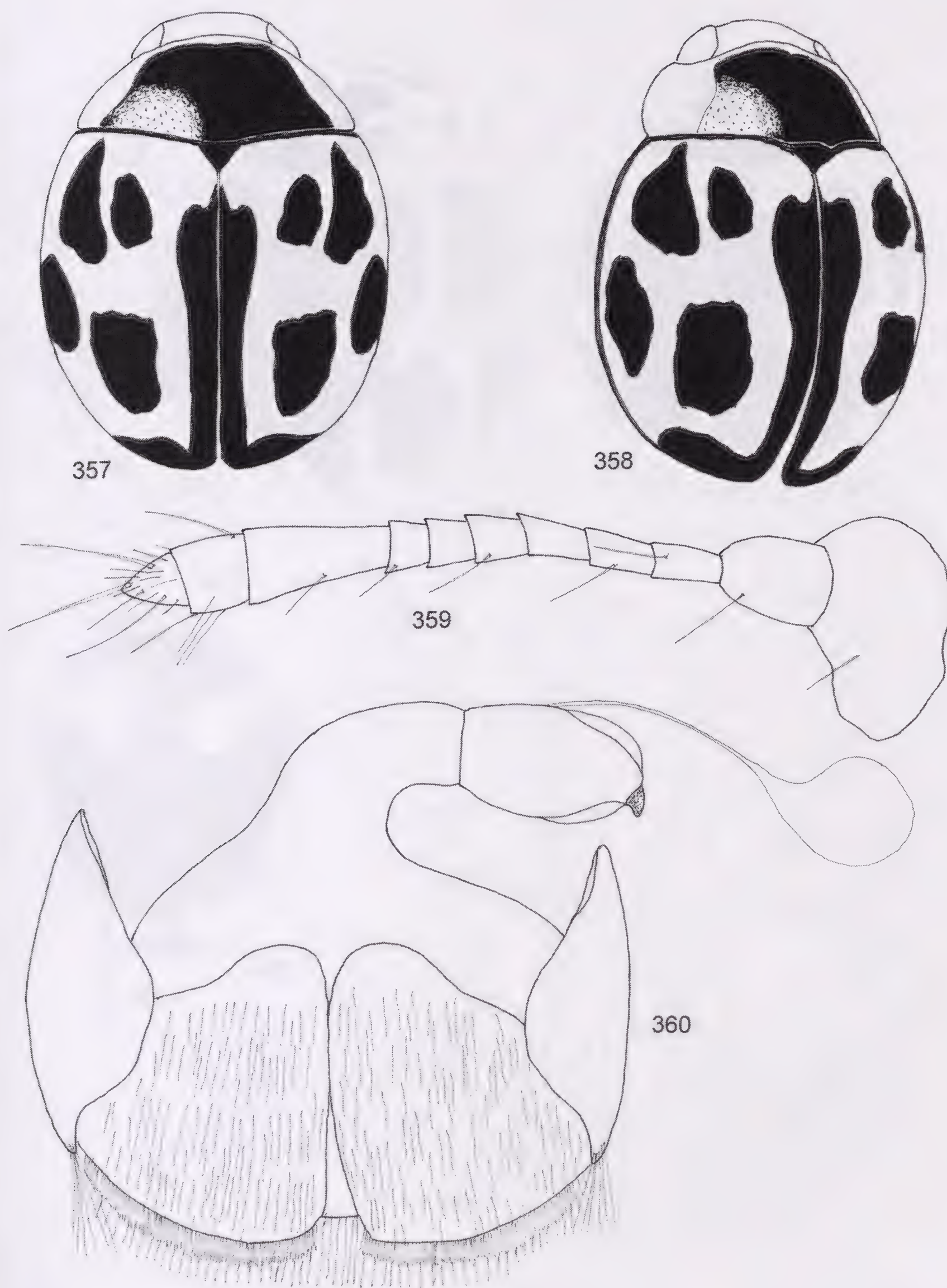
Figs. 342-346 - *Hyperaspis satipoensis* structures. 342-343, habitus. 344, antenna, last 5 articles missing. 345-346, female genitalia. 345, genital plates; 346, basal and distal portions.



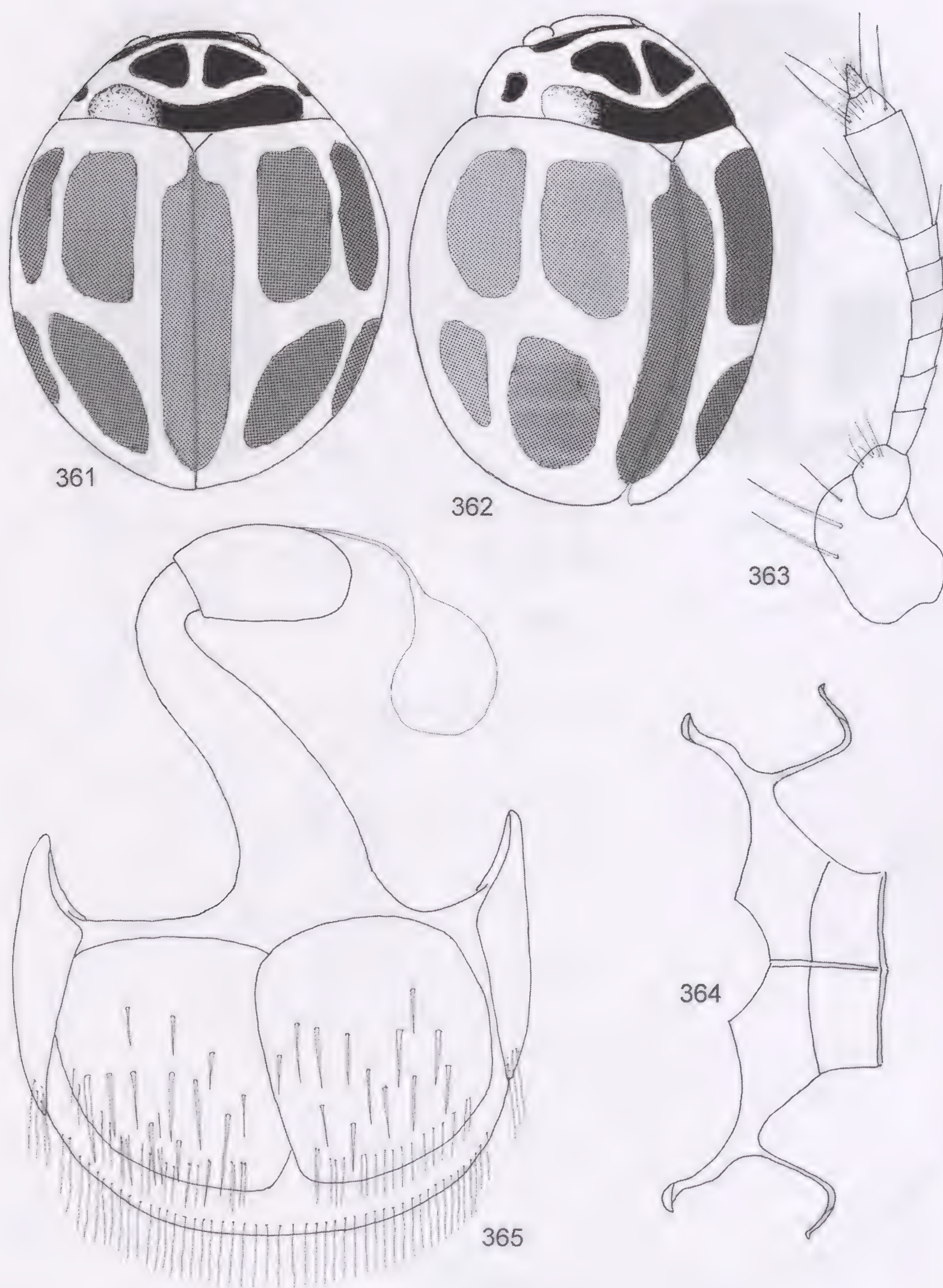
Figs. 347-351 - *Hyperaspis abertha* structures. 347-348, habitus. 349, antenna. 350-351, female genitalia. 350, genital plates; 351, basal and distal portions.



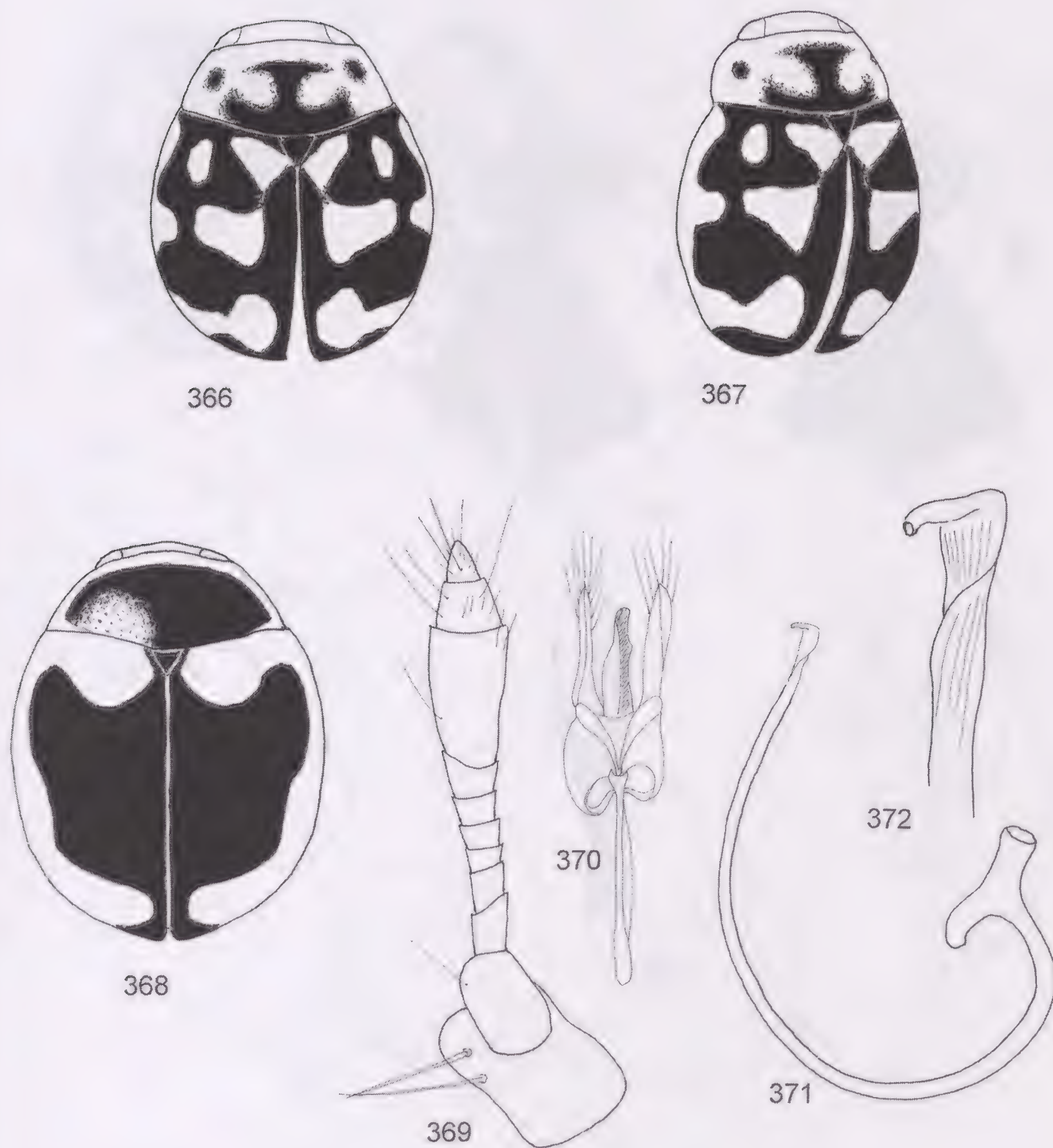
Figs. 352-356 - *Hyperaspis circumclusa* structures. 352-353, habitus. 354, protibia. 355-356, female genitalia. 355, complete genitalia with basal unit in ventral view; 356, lateral view of basal unit.



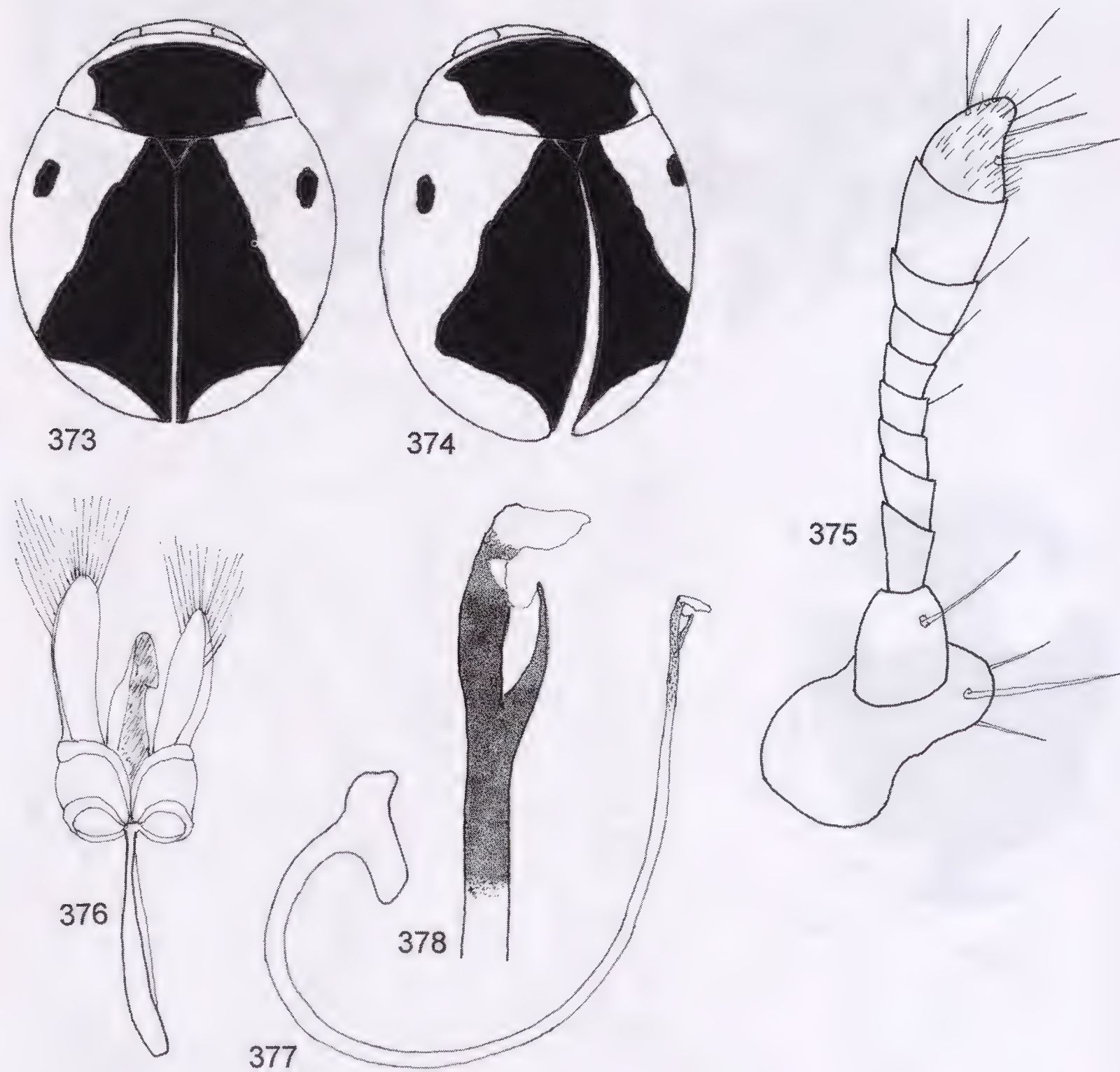
Figs. 357-360 - *Hyperaspis aemulata* structures. 357-358, habitus. 359, antenna. 360, female genitalia.



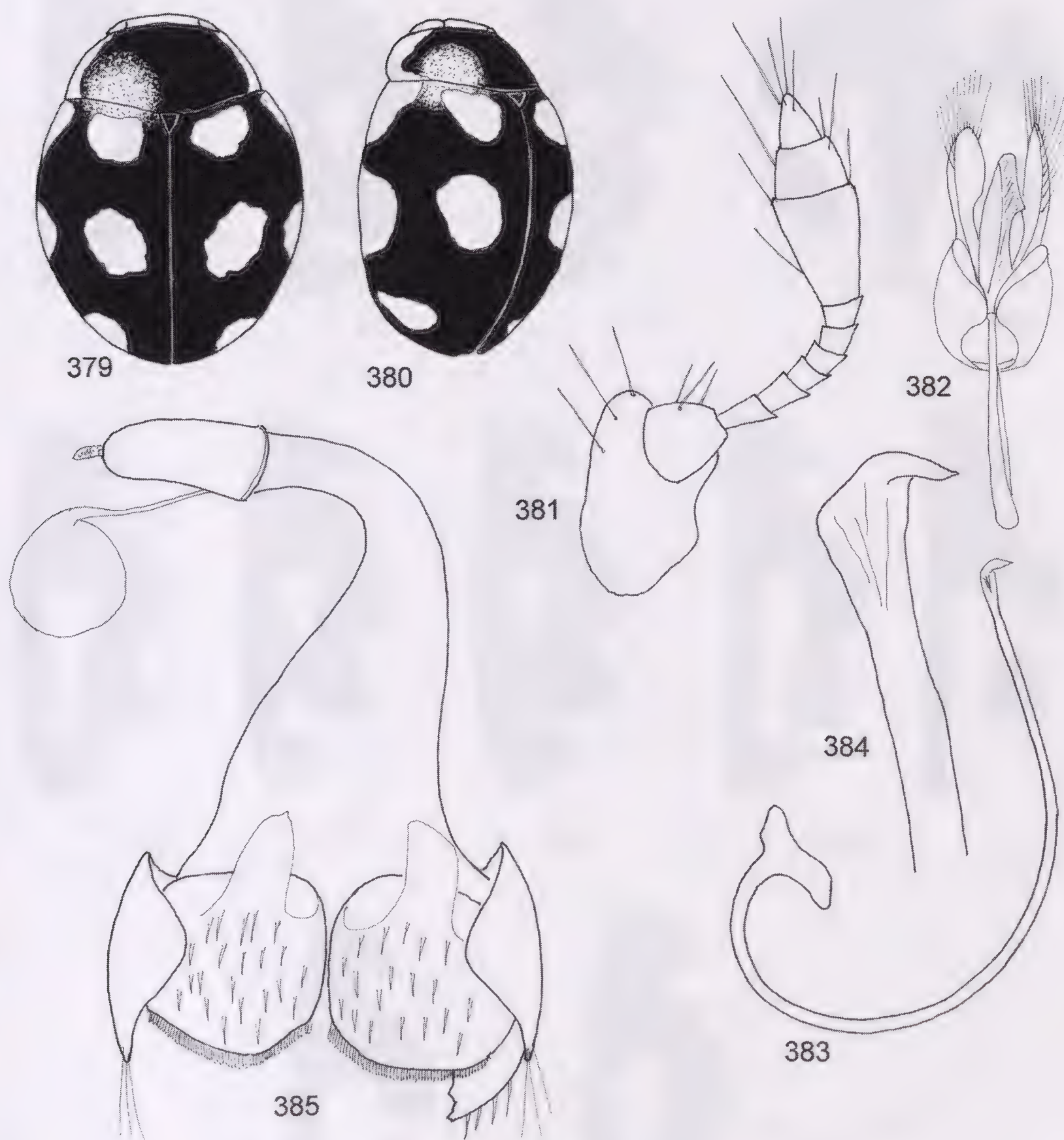
Figs. 361-365 - *Hyperaspis dispar* structures. 361-362, habitus. 363, antenna. 364, metendosternite. 365, female genitalia.



Figs. 366-372 - *Hyperaspis histrionica* and *H. ayacucho* habitus and structures. 366-367, *H. histrionica* habitus. 368-372, *H. ayacucho* structures. 368, habitus. 369, antenna. 370-372, male genitalia. 370, phallobase; 371, siphon; 372, enlarged siphonal apex.



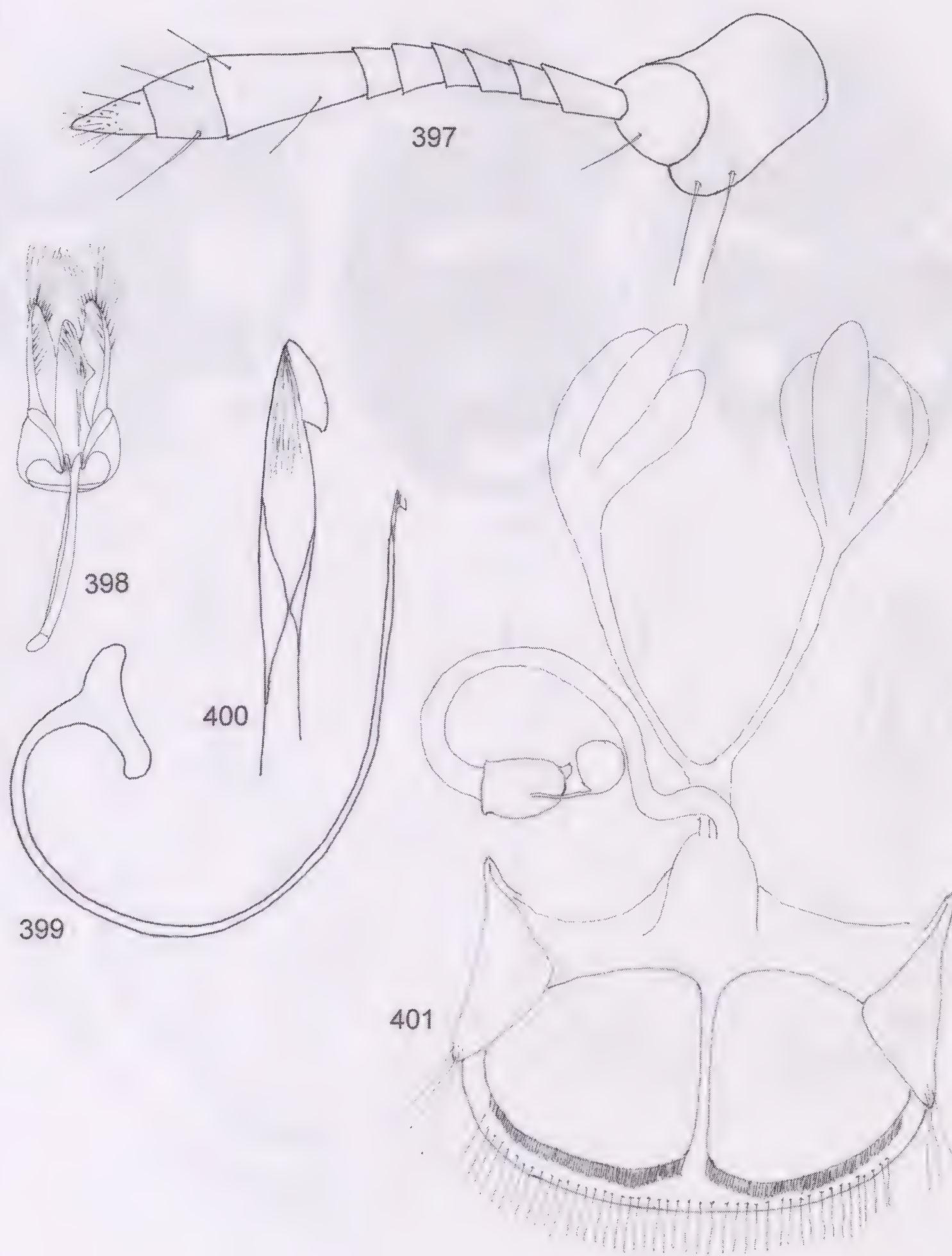
Figs. 373-378 - *Hyperaspis herrerae* structures. 373-374, habitus. 375, antenna. 376-378, male genitalia. 376, phallobase; 377, siphon; 378, enlarged siphonal apex.



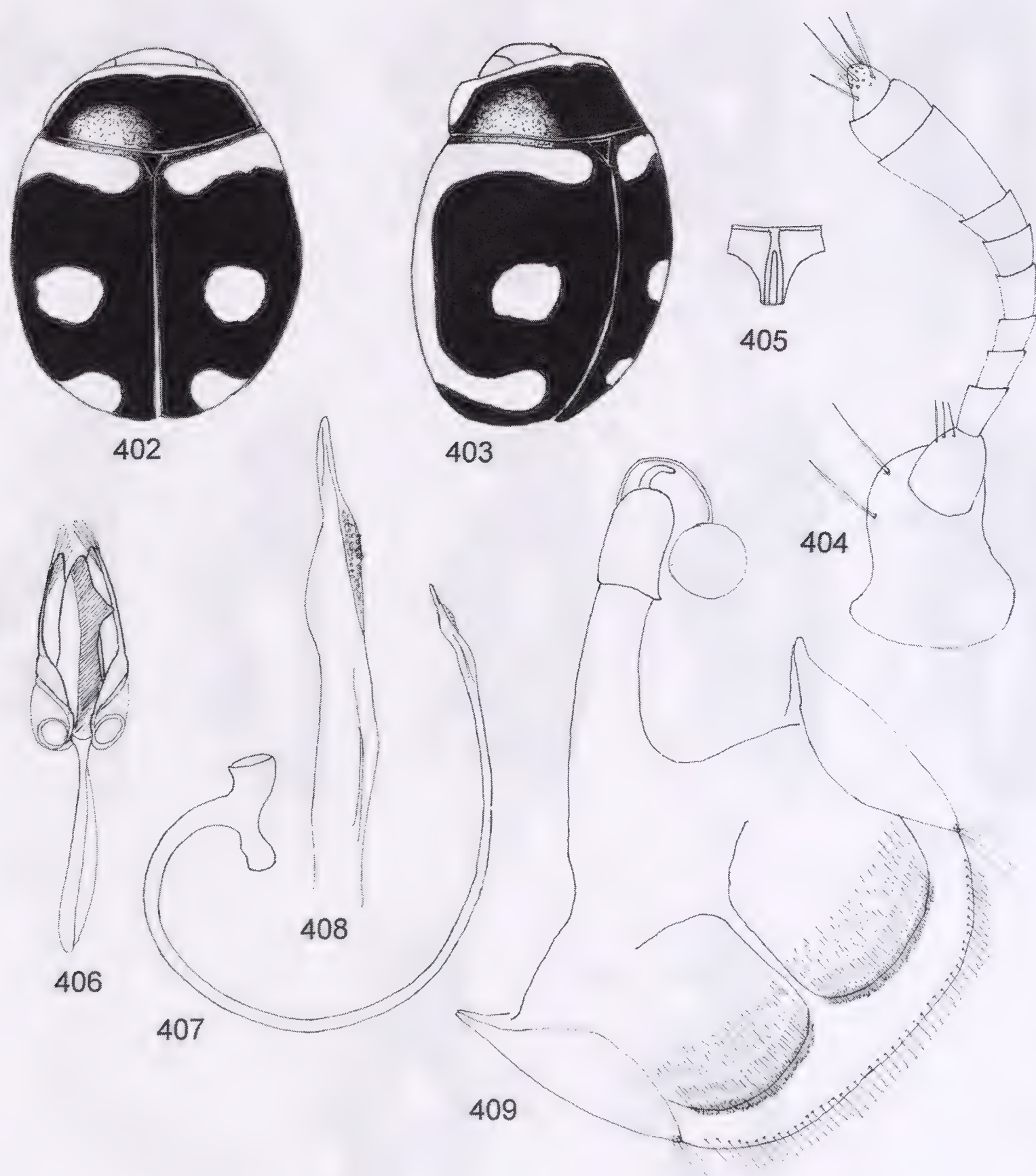
Figs. 379-385 - *Hyperaspis vredenburghi* structures. 379-380, habitus. 381, antenna. 382-384, male genitalia. 382, phallobase; 383, siphon; 384, enlarged siphonal apex. 385, female genitalia.



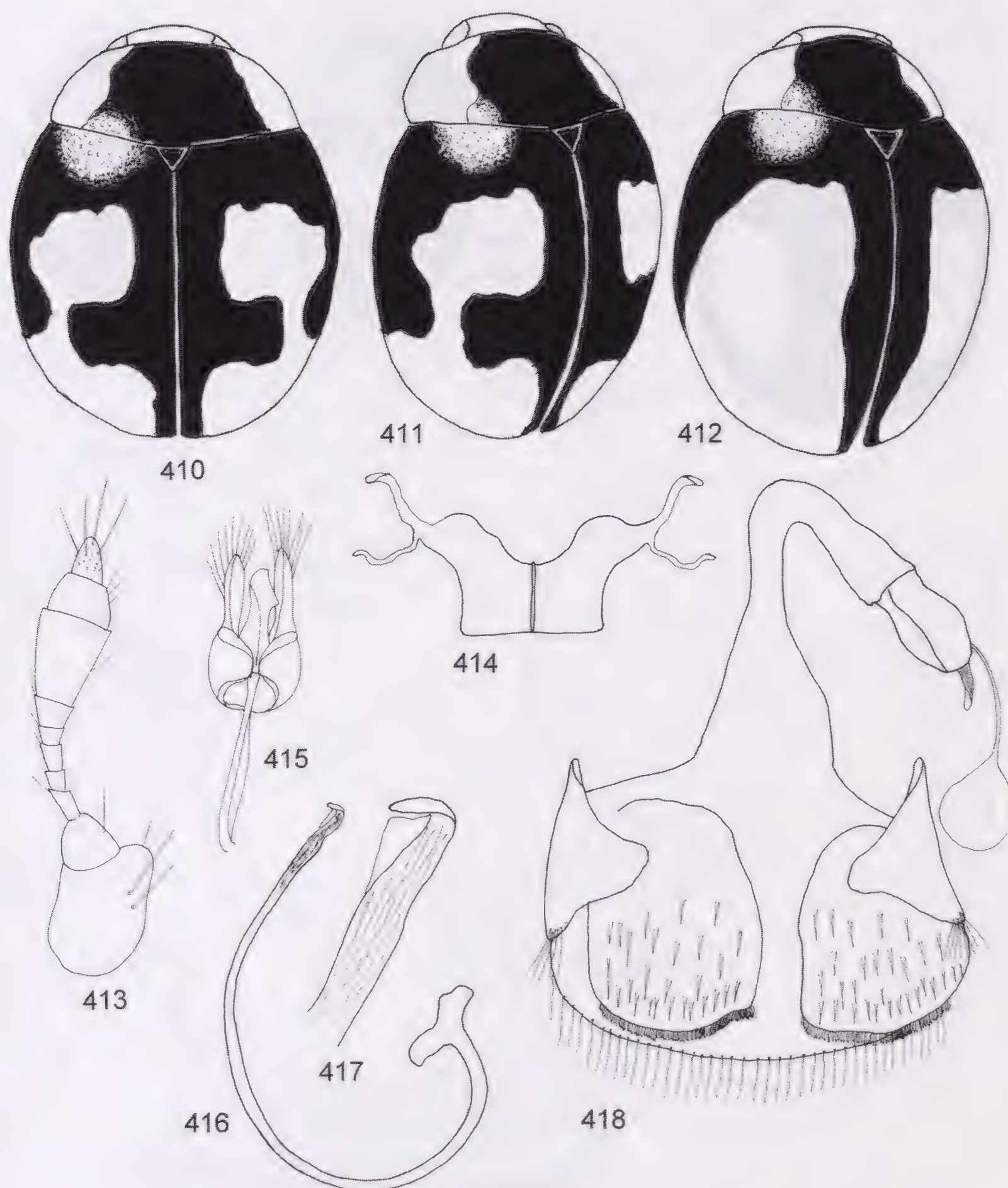
Figs. 386-396 - *Hyperaspis festiva* habitus and variations.



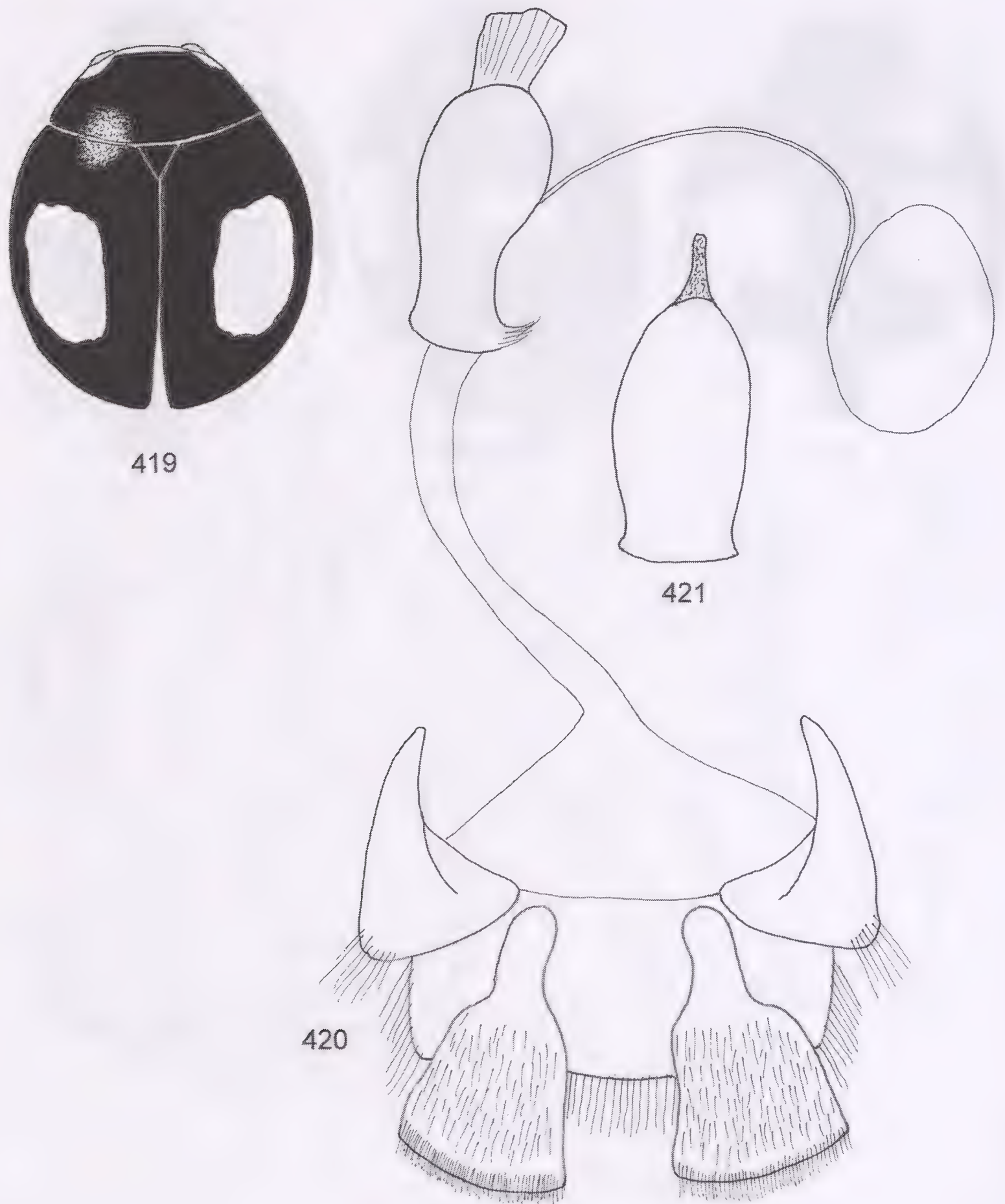
Figs. 397-401 - *Hyperaspis festiva* structures. 397, antenna. 398-400, male genitalia. 398, phallobase; 399, siphon; 400, enlarged siphonal apex. 401, female genitalia.



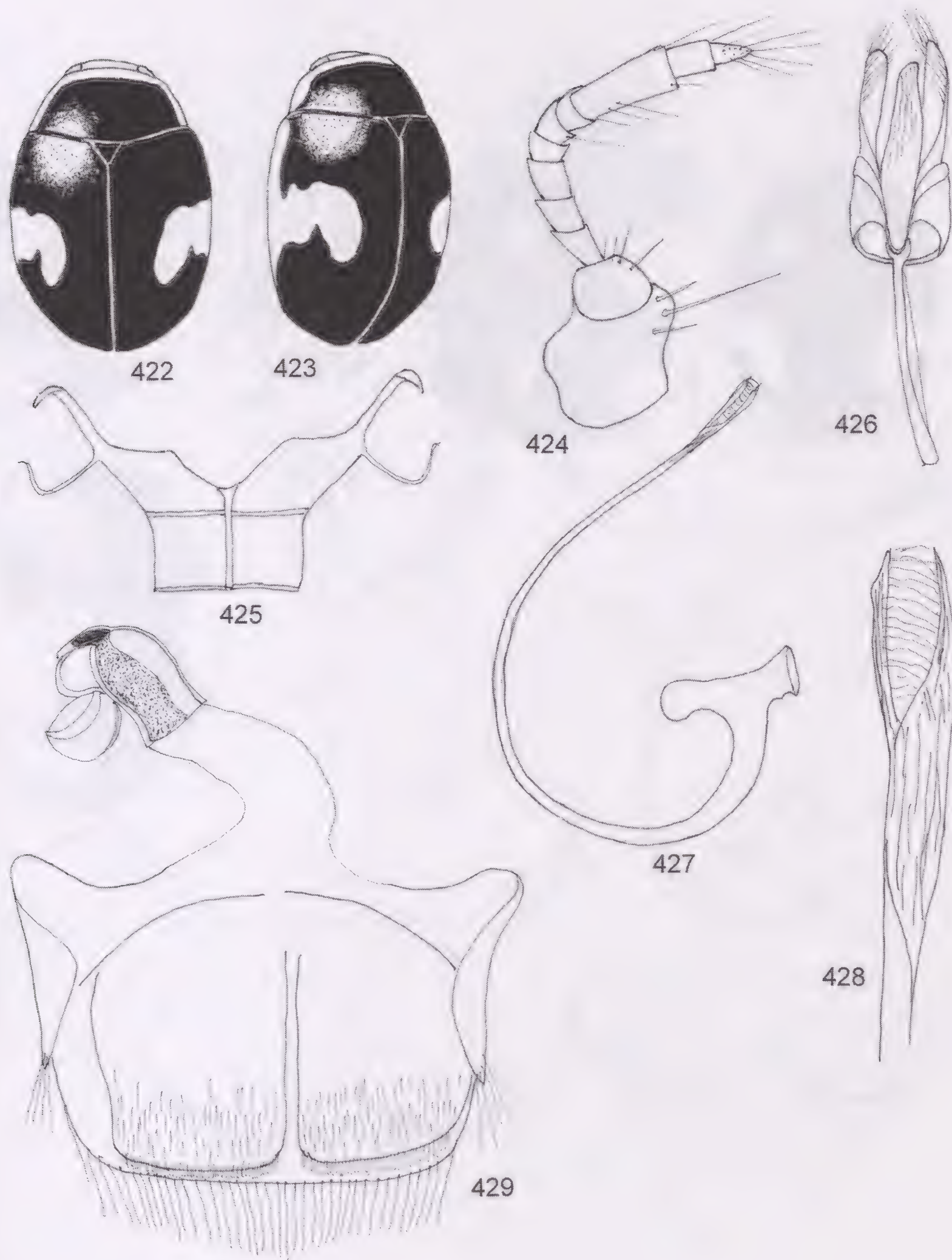
Figs. 402-409 - *Hyperaspis germainii* structures. 402-403, habitus. 404, antenna. 405, prosternum. 406-408, male genitalia. 406, phallobase; 407, siphon; 408, enlarged siphonal apex. 409, female genitalia.



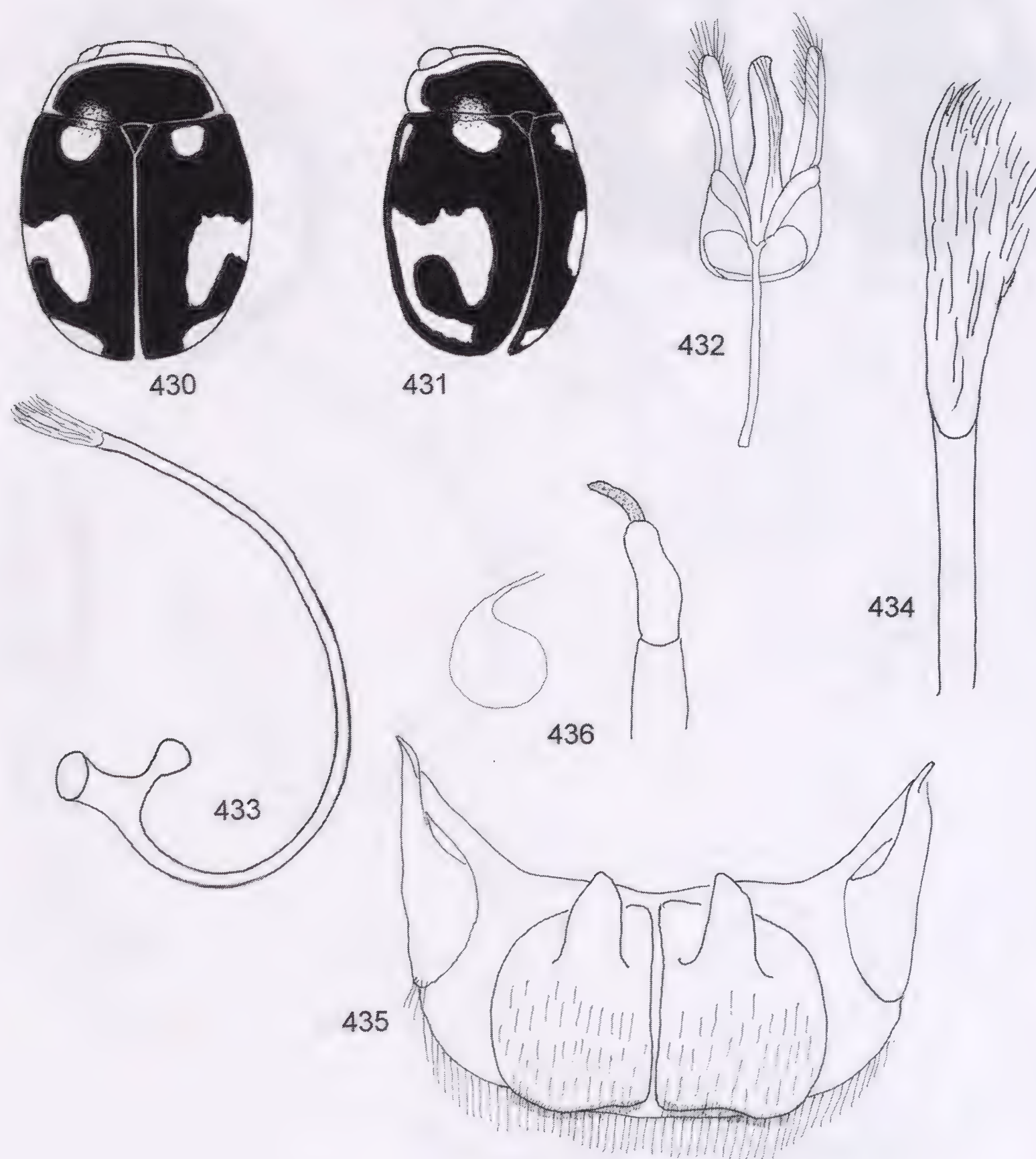
Figs. 410-418 - *Hyperaspis connectens* structures. 410-412, habitus and variations. 413, antenna. 414, metendosternite. 415-417, male genitalia. 415, phallobase; 416, siphon; 417, enlarged siphonal apex. 418, female genitalia.



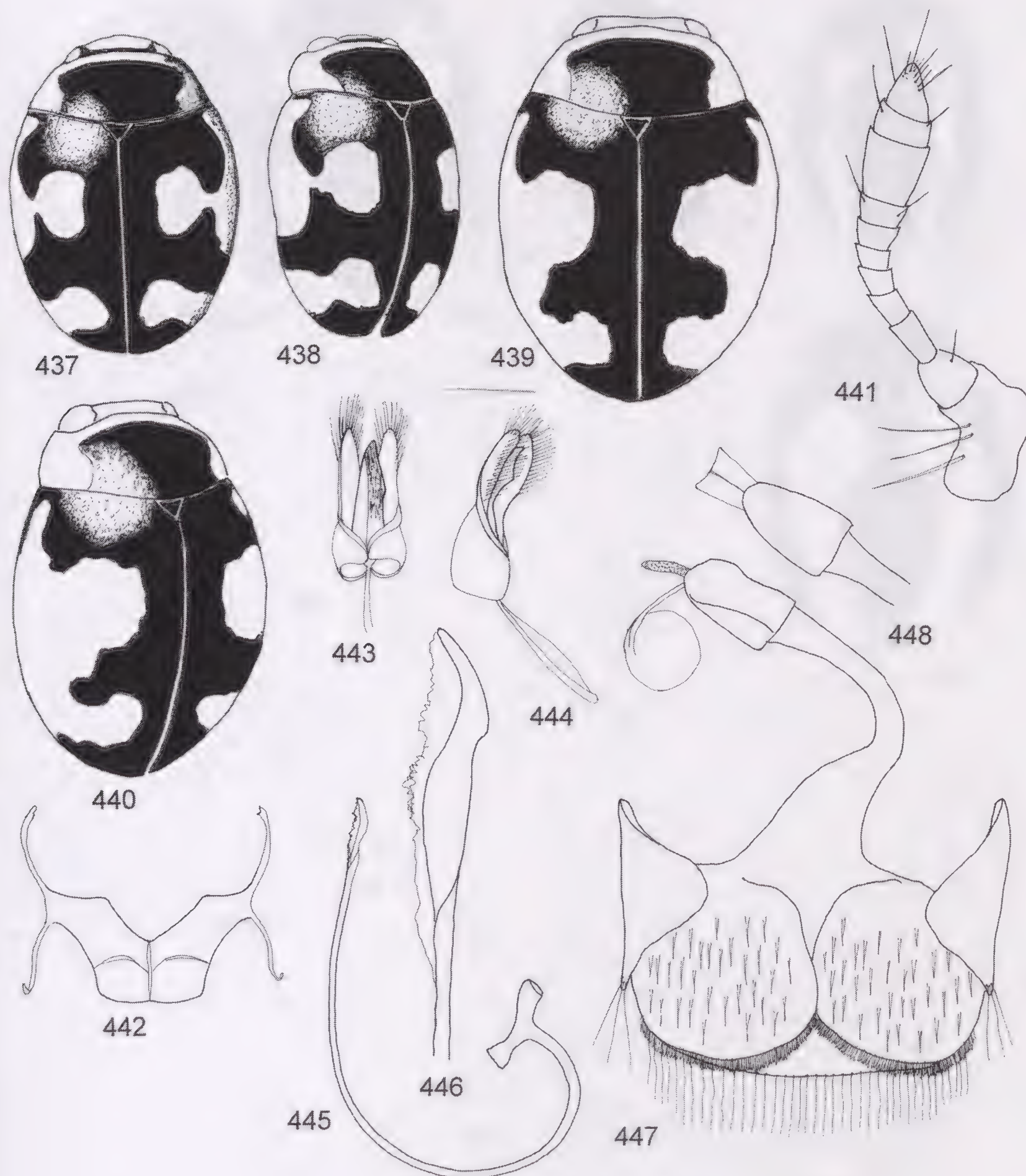
Figs. 419-421 - *Hyperaspis ingrata* habitus and female genitalia. 419, habitus. 420-421, female genitalia. 420, complete genitalia; 421, ventral view of basal unit.



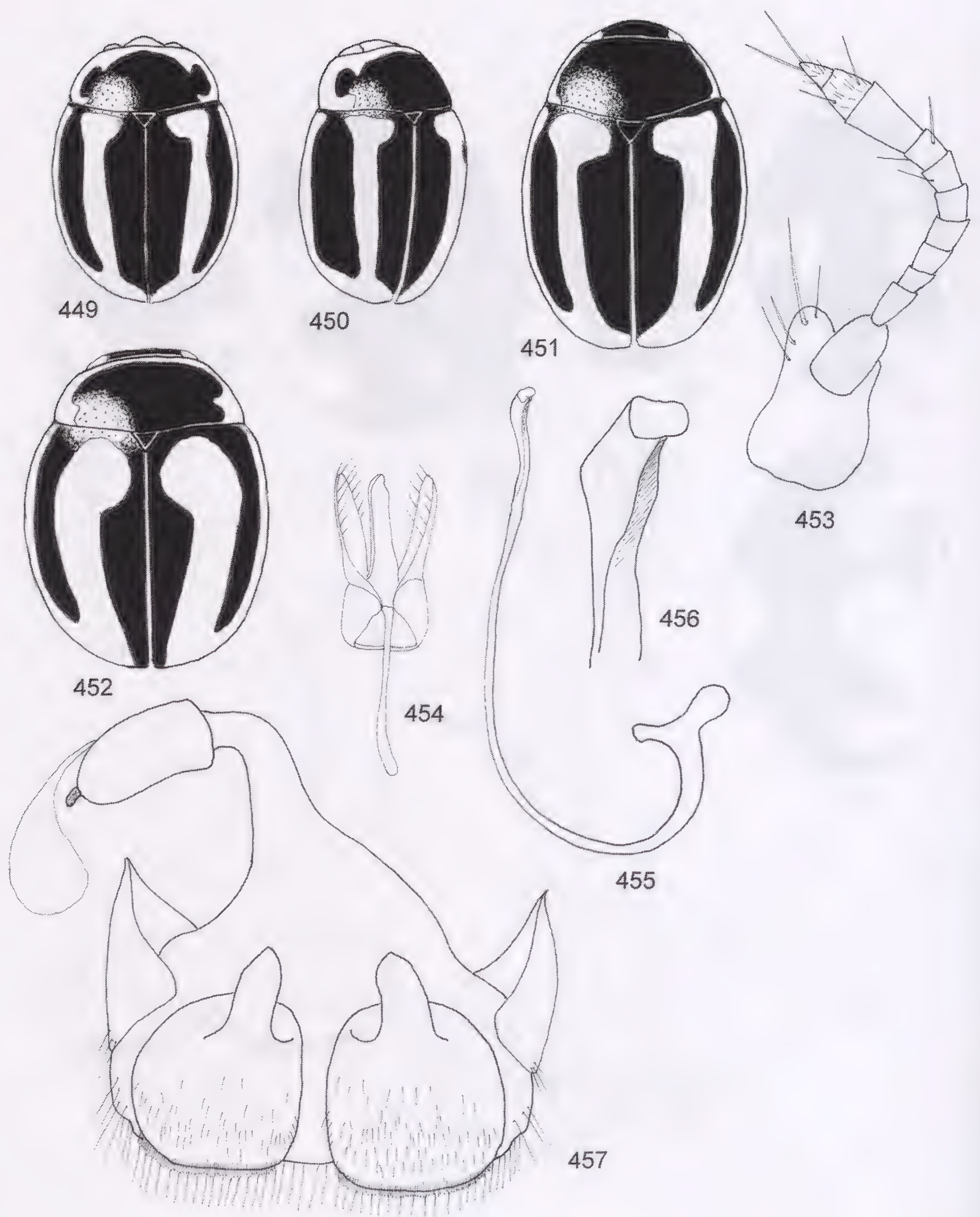
Figs. 422-429 - *Hyperaspis funesta* structures. 422-423, habitus. 424, antenna. 425, mendosternite. 426-428, male genitalia. 426, phallobase; 427, siphon; 428, siphonal apex. 429, female genitalia.



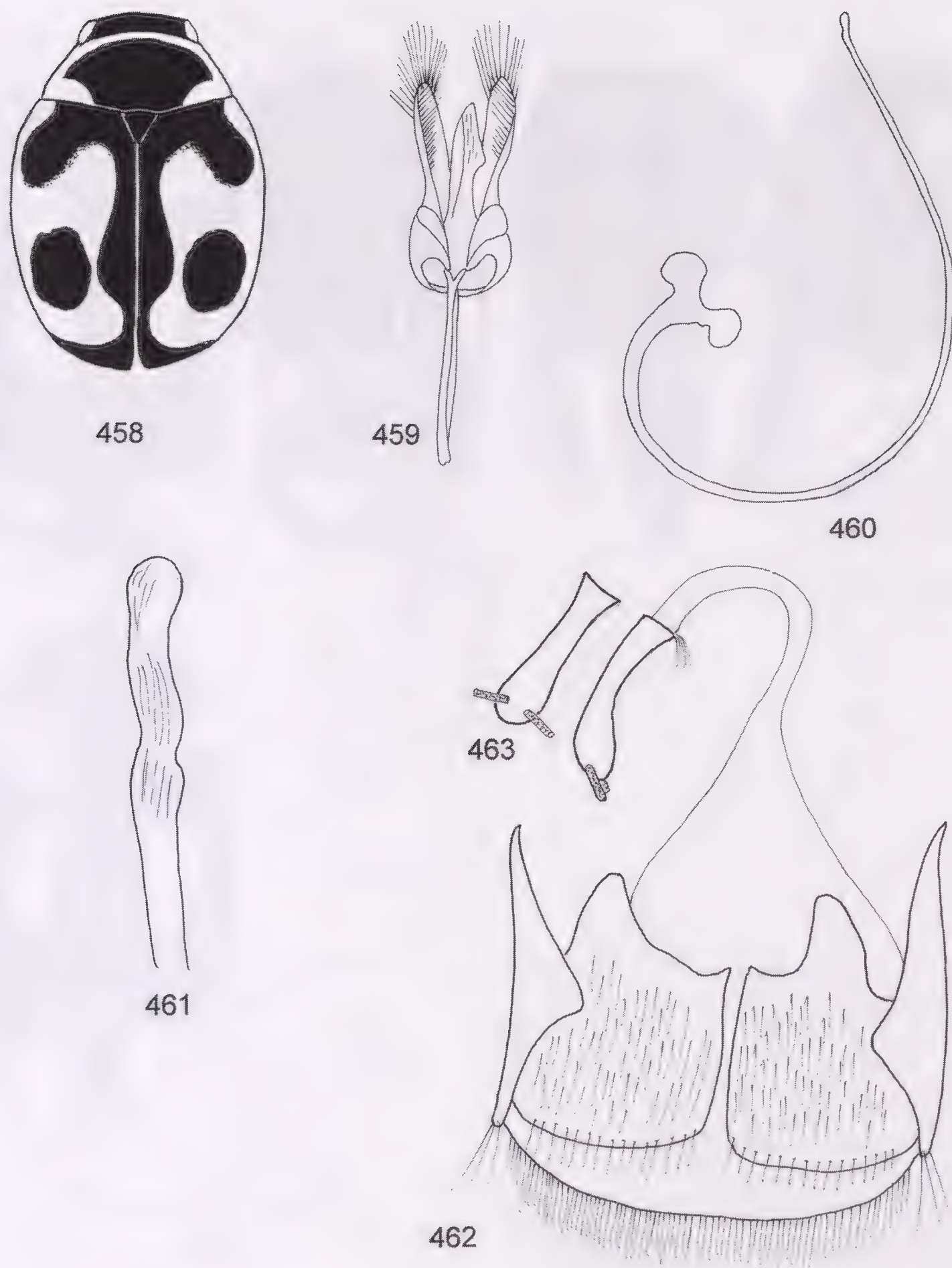
Figs. 430-436 - *Hyperaspis nana* habitus and genitalia. 430-431, habitus. 432-434, male genitalia. 432, phallobase; 433, siphon; 434, enlarged siphonal apex. 435-436, female genitalia. 435, genital plates; 436, distal portion, ventral view of basal portion.



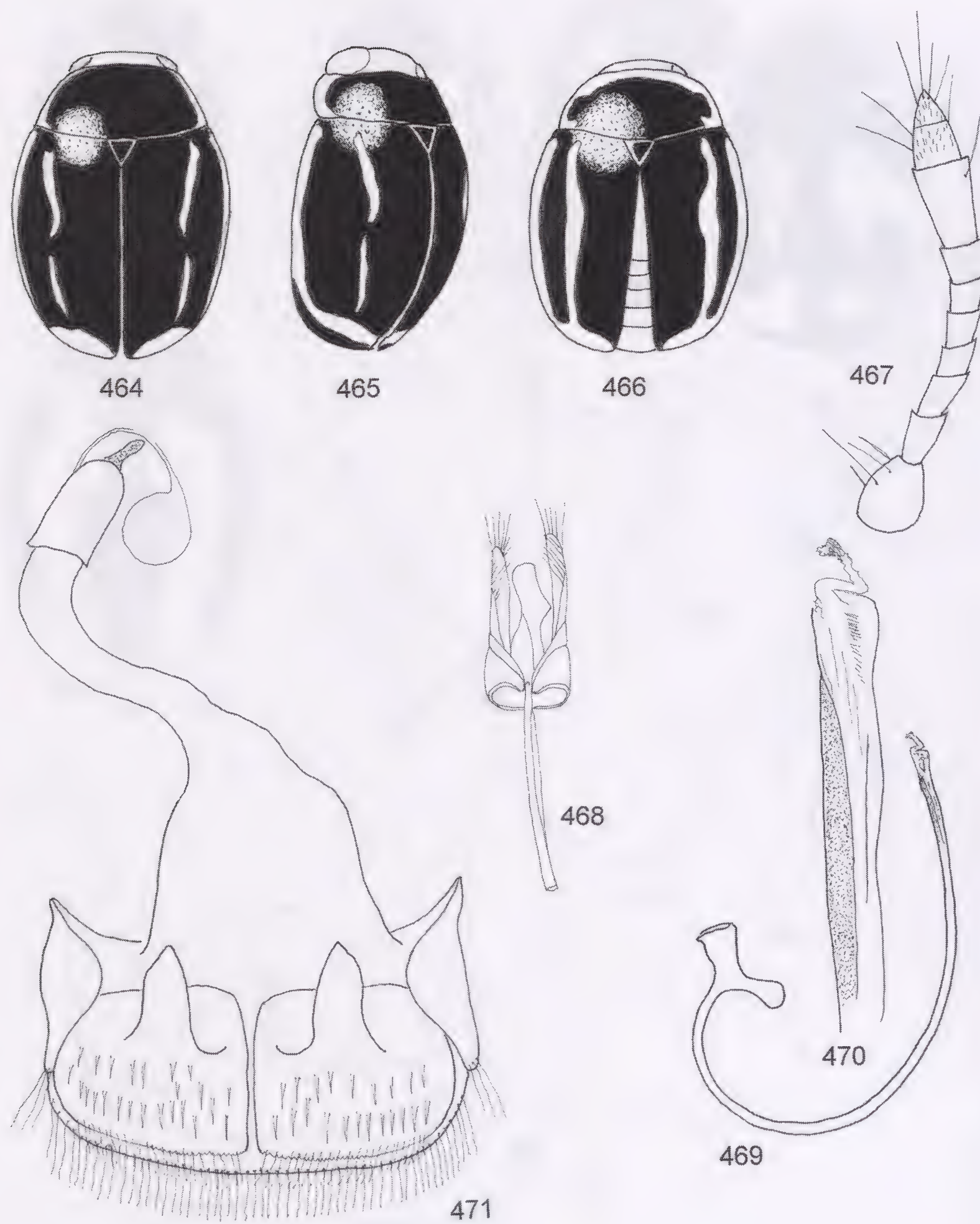
Figs. 437-448 - *Hyperaspis sphaeridioides* structures. 437-440, habitus and variations. 441, antenna. 442, metendosternite. 443-446, male genitalia. 443, phallobase, ventral view; 444, phallobase, lateral view; 445, siphon; 446, enlarged siphonal apex; 447-448, female genitalia. 447, complete genitalia; 448, lateral view of basal unit.



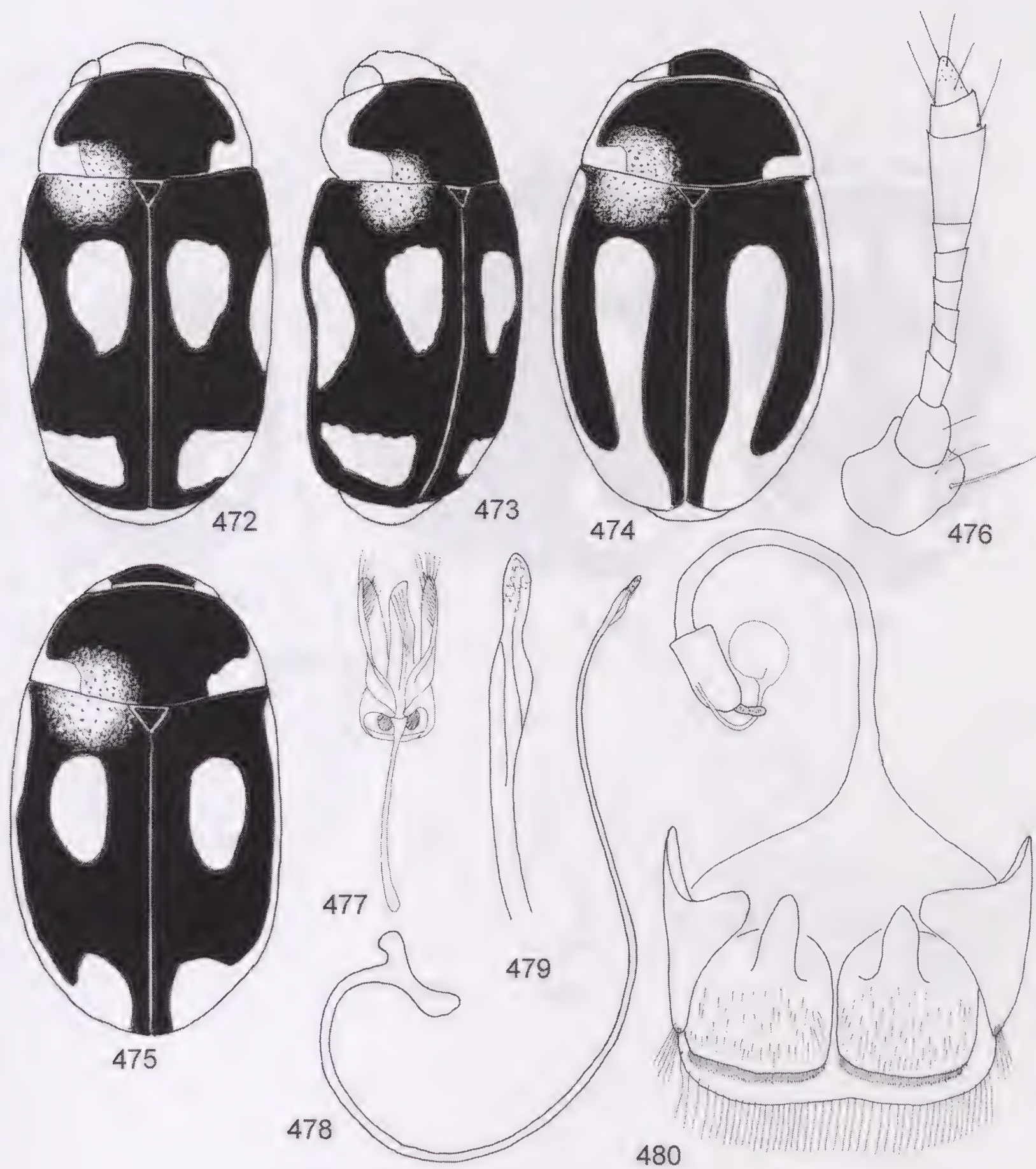
Figs. 449-457 - *Hyperaspis conclusa* structures. 449-452, habitus and variations. 453, antenna. 454-456, male genitalia. 454, phallobase; 455, siphon; 456, enlarged siphonal apex. 457, female genitalia.



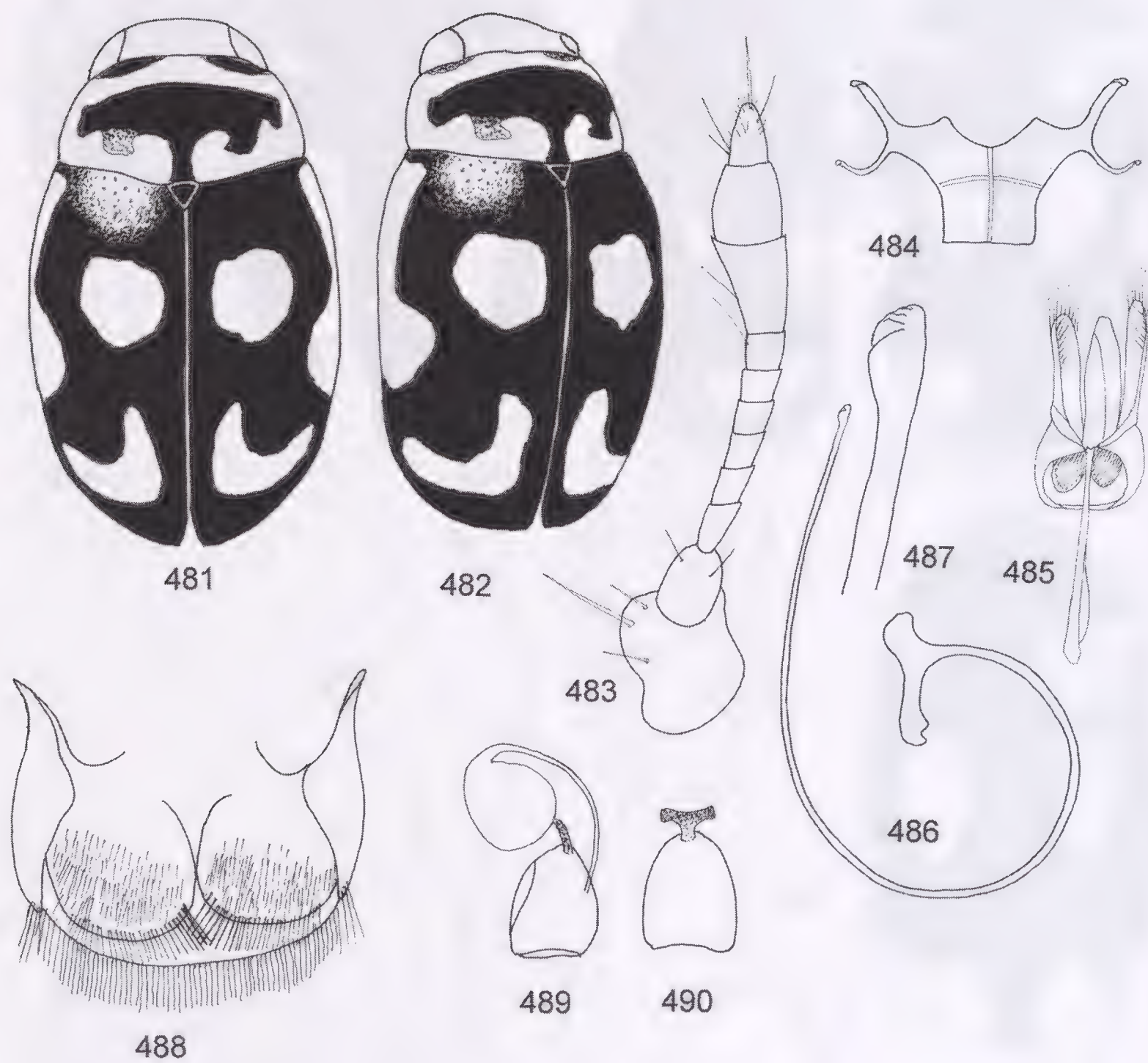
Figs. 458-463 - *Hyperaspis arida* habitus and genitalia. 458, habitus. 459-461, male genitalia. 459, phallobase; 460, siphon; 461, enlarged siphonal apex. 462-463, female genitalia. 462, complete genitalia, basal unit in ventral view; 463, basal unit in lateral view.



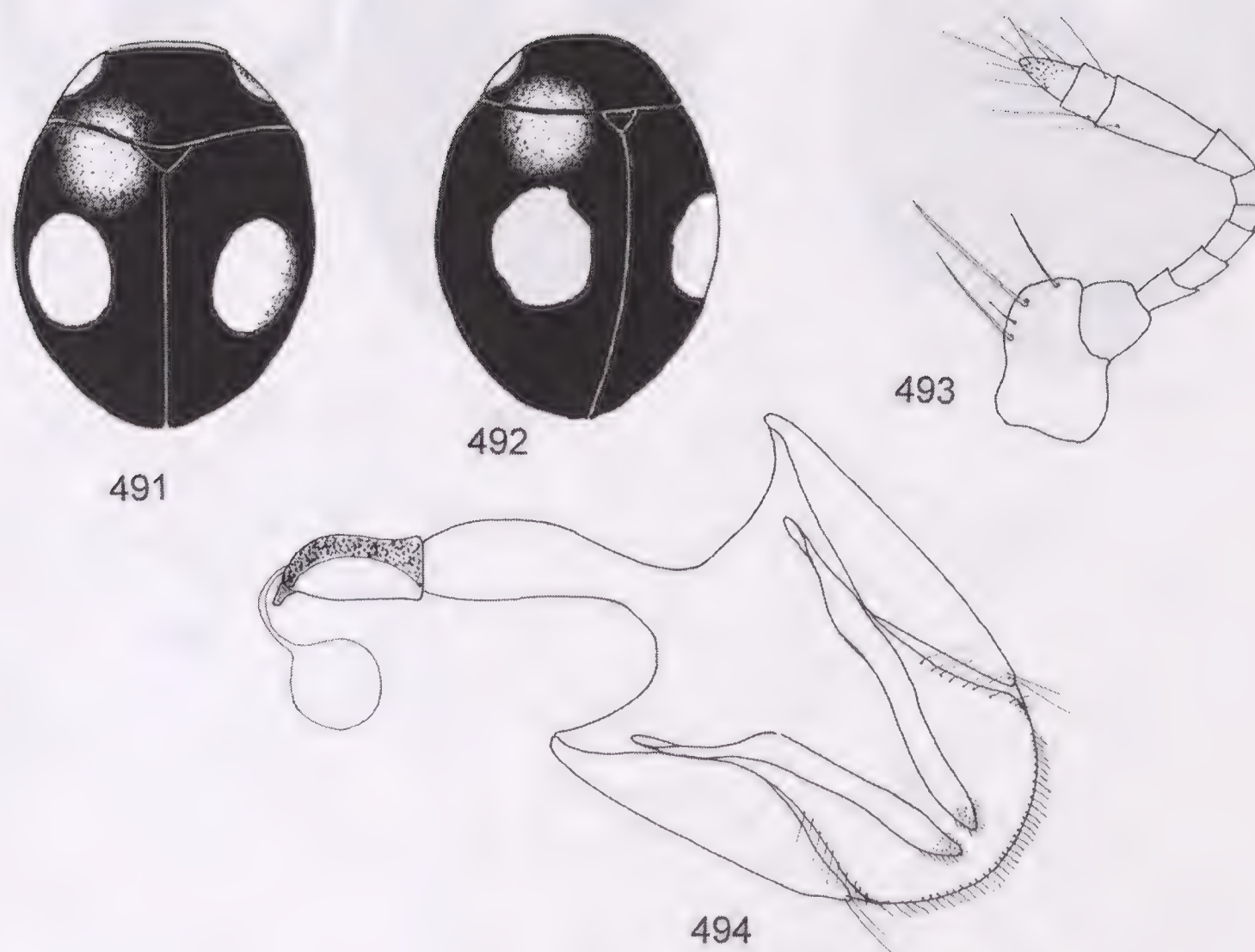
Figs. 464-471 - *Hyperaspis elegantissima* structures. 464-466, habitus and variations. 467, antenna. 468-470, male genitalia. 468, phallobase; 469, siphon; 470, enlarged siphonal apex. 471, female genitalia.



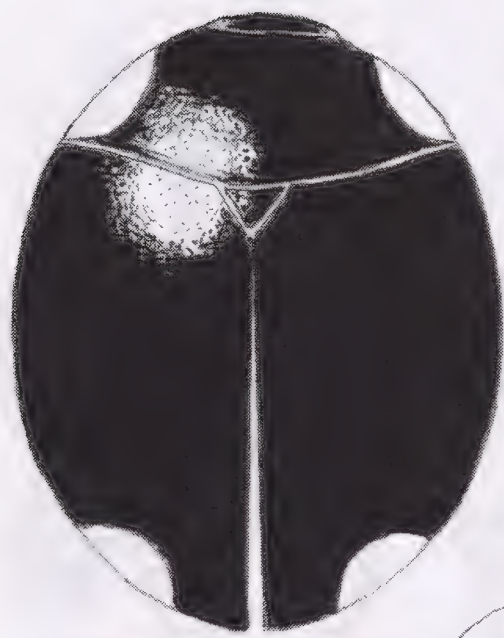
Figs. 472-480 - *Hyperaspis longula* structures. 472-475, habitus and variations. 476, antenna. 477-479, male genitalia. 477, phallobase; 478, siphon; 479, enlarged siphonal apex. 480, female genitalia.



Figs. 481-490 - *Hyperaspis prolata* structures. 481-482, habitus. 483, antenna. 484, metendosternite. 485-487, male genitalia. 485, phallobase; 486, siphon; 487, siphonal apex. 488-490, female genitalia. 488, genital plates; 489, ventral view of basal and distal units; 490, lateral view of basal unit.



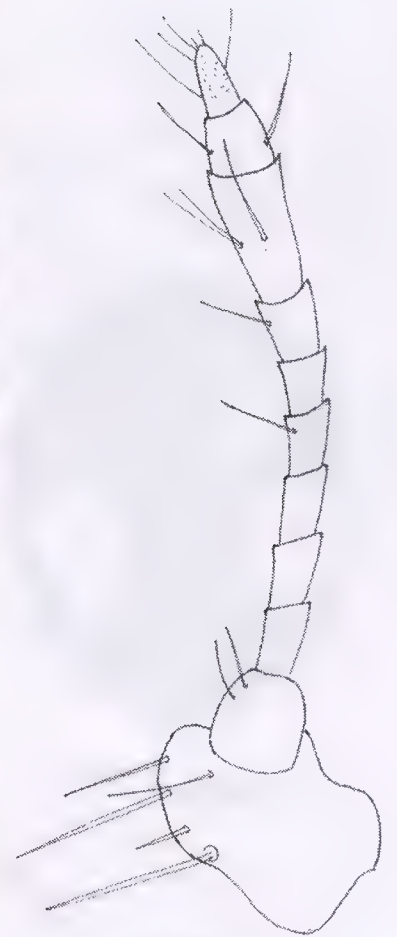
Figs. 491-494 - *Temuisvalvae unipunctata* structures. 491-492, habitus. 493, antenna. 494, female genitalia.



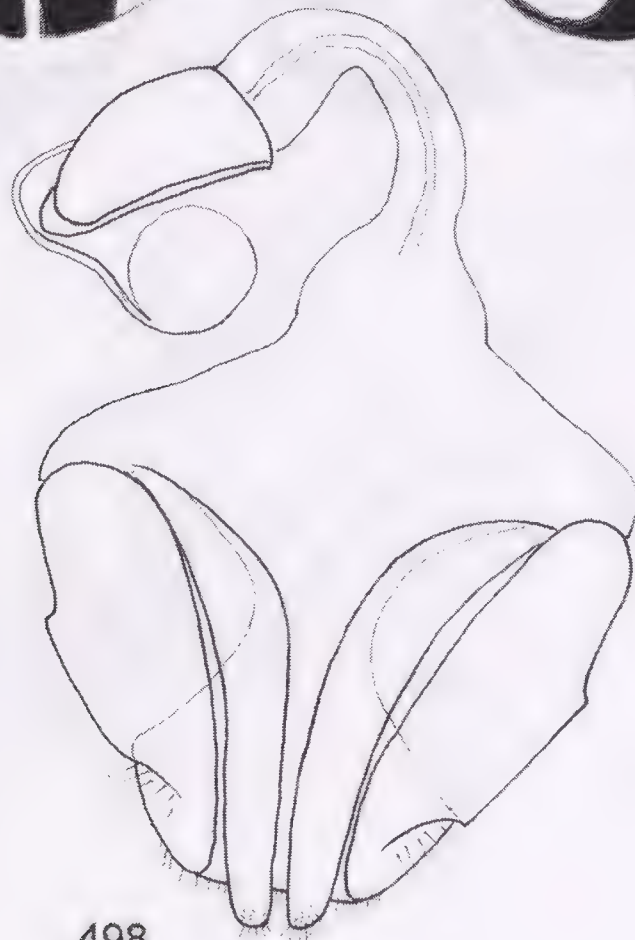
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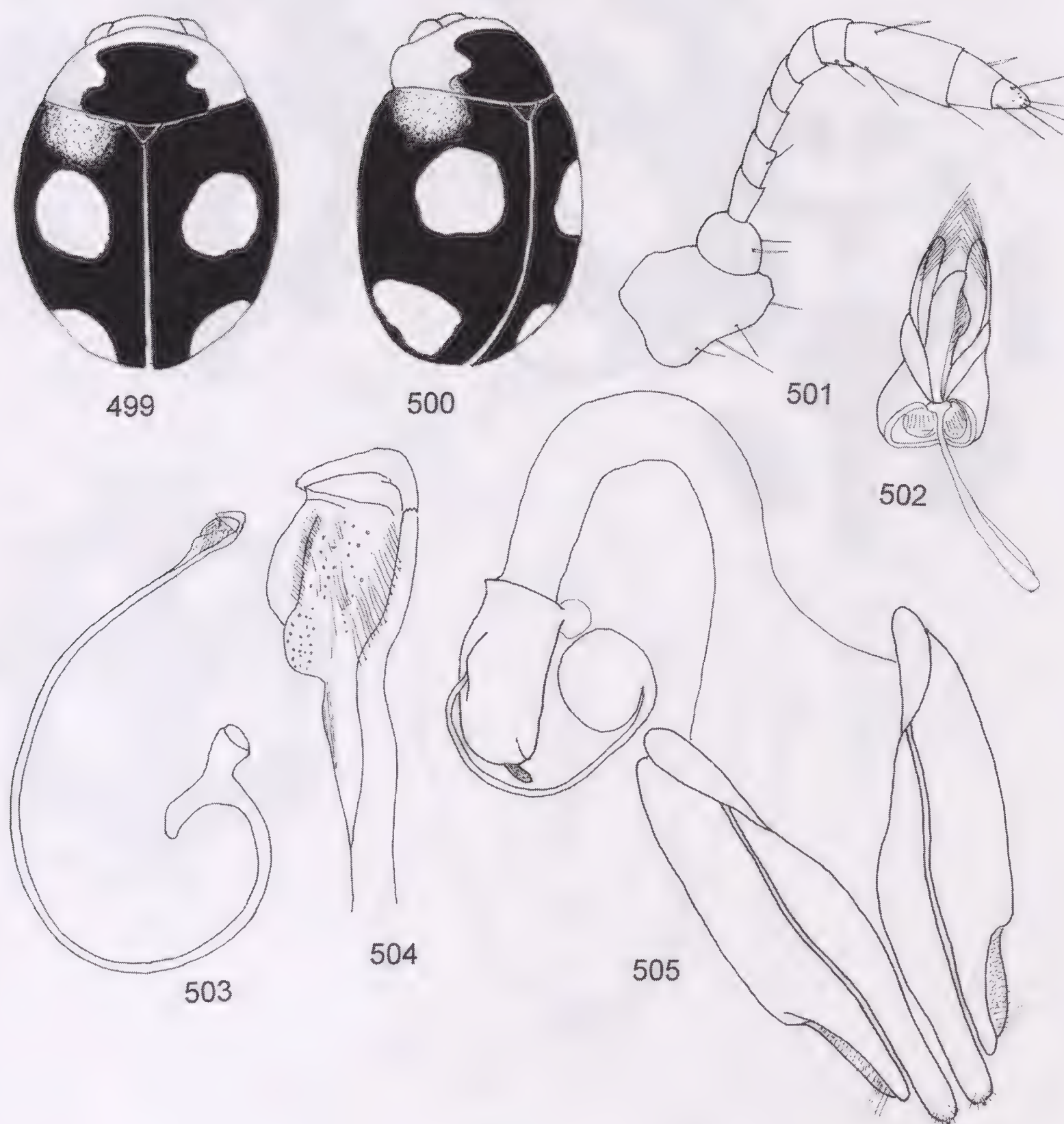


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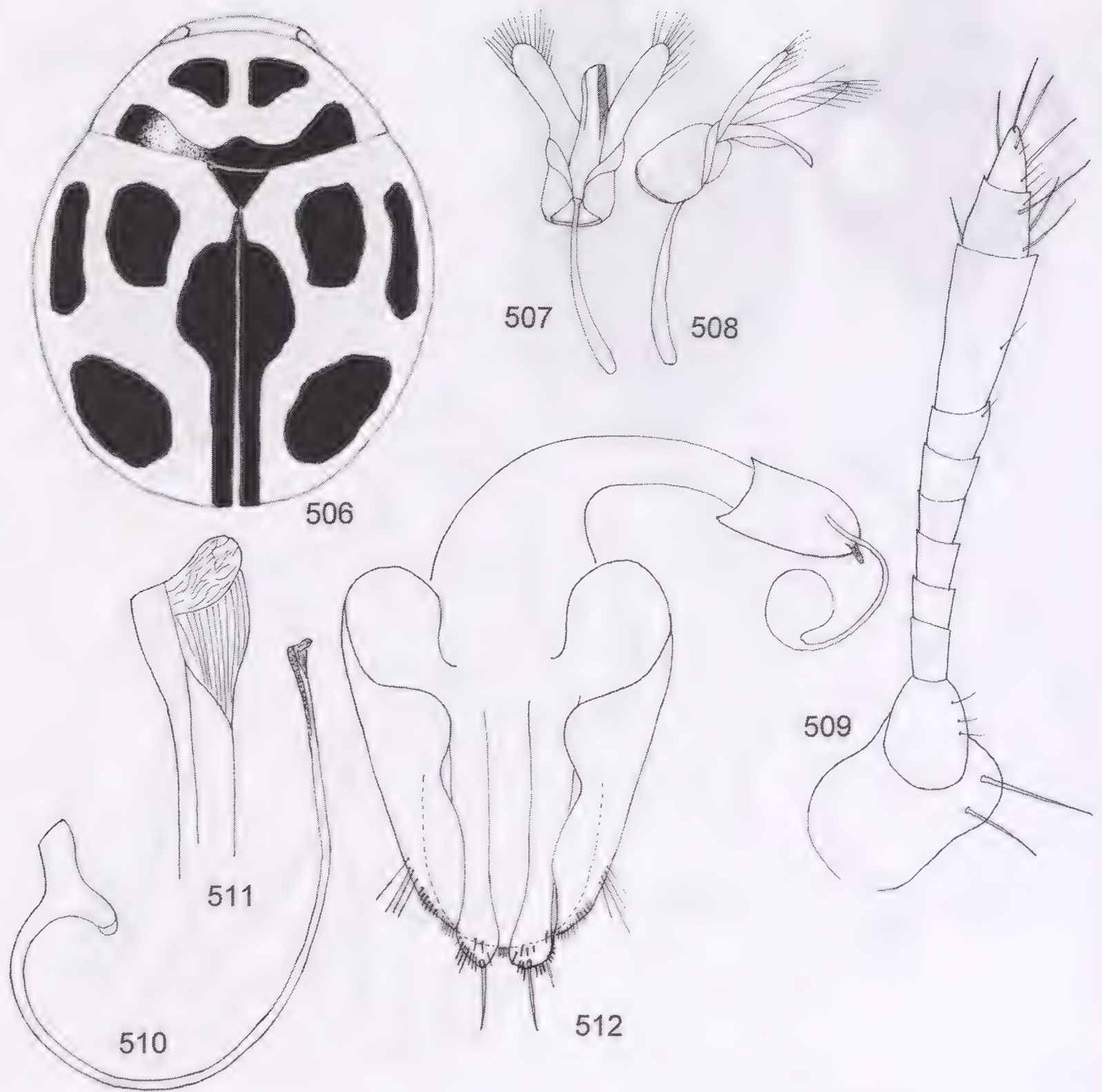


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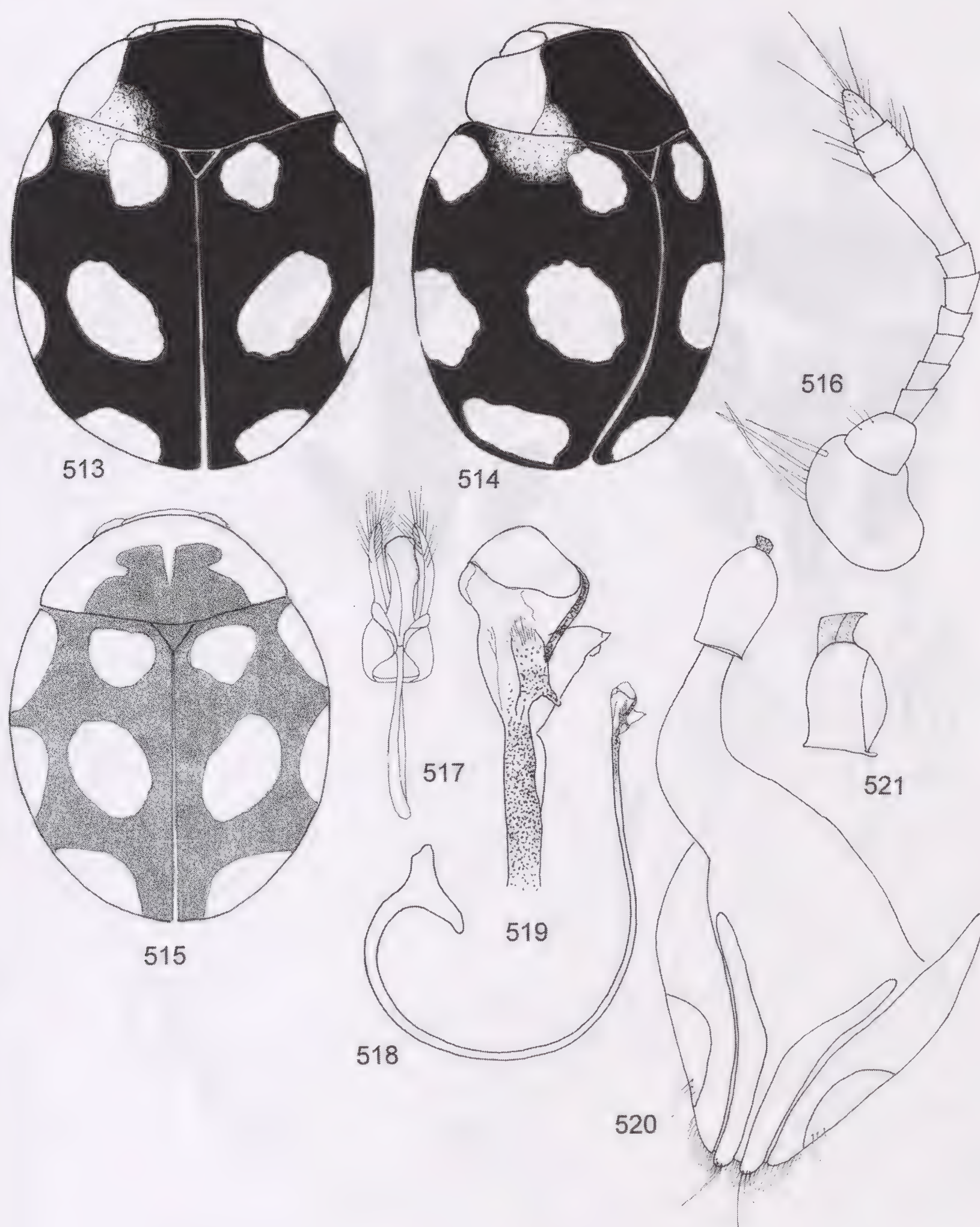
Figs. 495-498 - *Temuisvalvae peregrina* structures. 495-496, habitus. 497, antenna. 498, female genitalia.



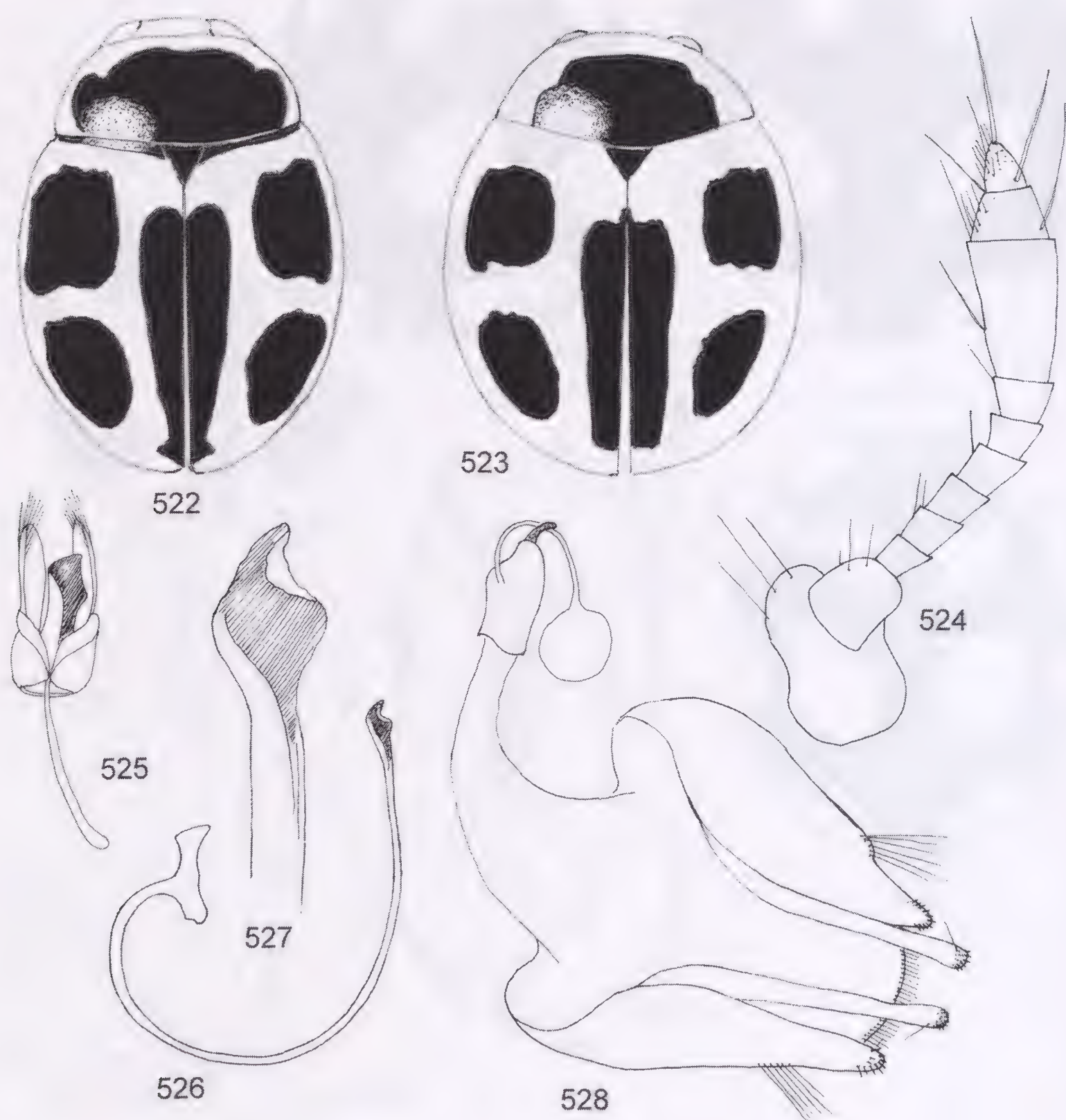
Figs. 499-505 - *Tenuisvalvae deyrollei* structures. 499-500, habitus. 501, antenna. 502-504, male genitalia. 502, phallobase; 503, siphon; 504, enlarged siphonal apex. 505, female genitalia.



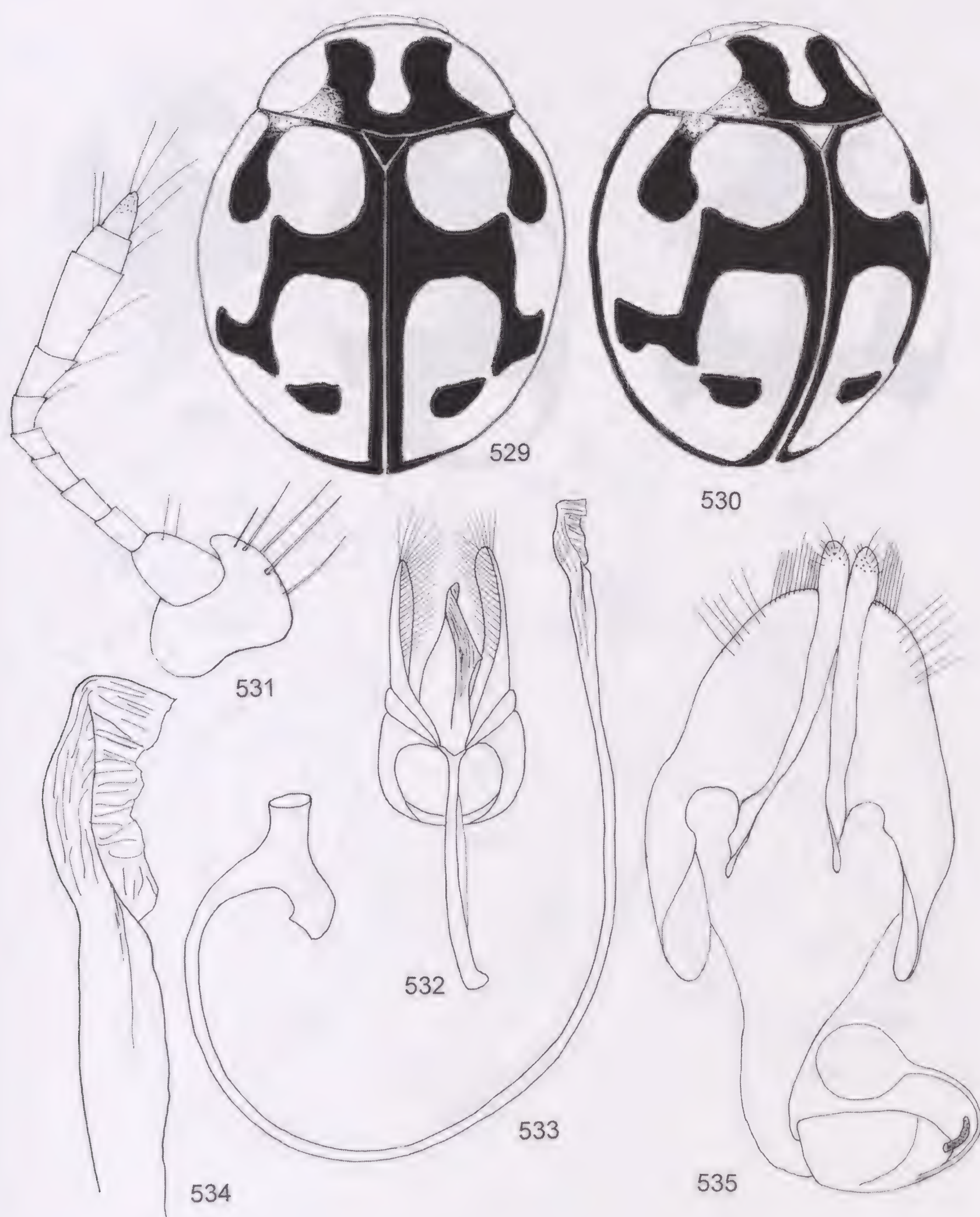
Figs. 506-512 - *Temisvalvae notata* structures. 506, habitus. 509, antenna. 507-511, male genitalia. 507, ventral view of phallobase; 508, lateral view of phallobase; 510, siphon; 511, enlarged siphonal apex. 512, female genitalia.



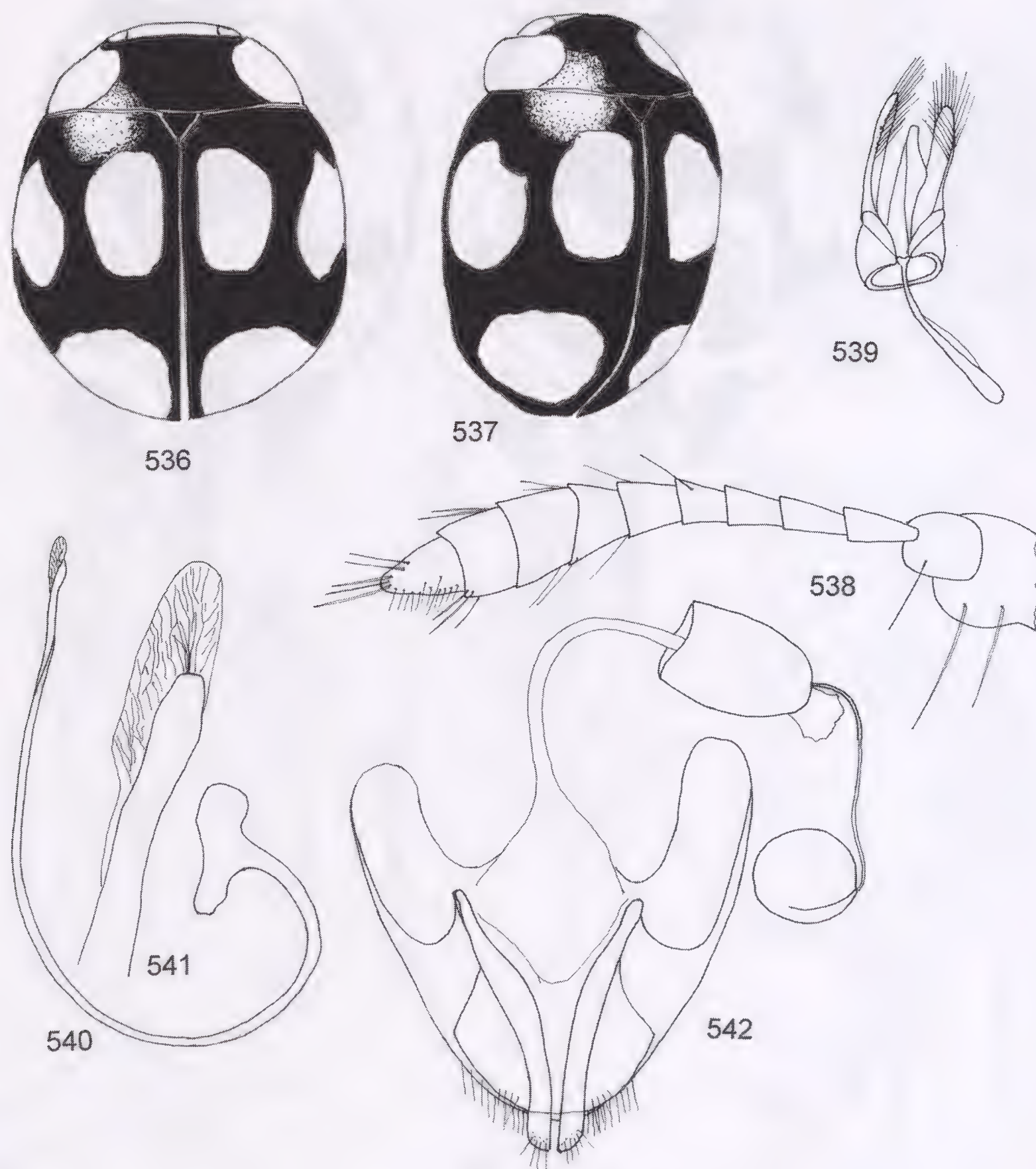
Figs. 513-521 - *Temisvalvae bisquinquepustulata* structures. 513-515, habitus. 516, antenna. 517-519, male genitalia. 517, phallobase; 518, siphon; 519, enlarged siphonal apex. 520-521, female genitalia. 520, complete genitalia; 521, lateral view of basal unit.



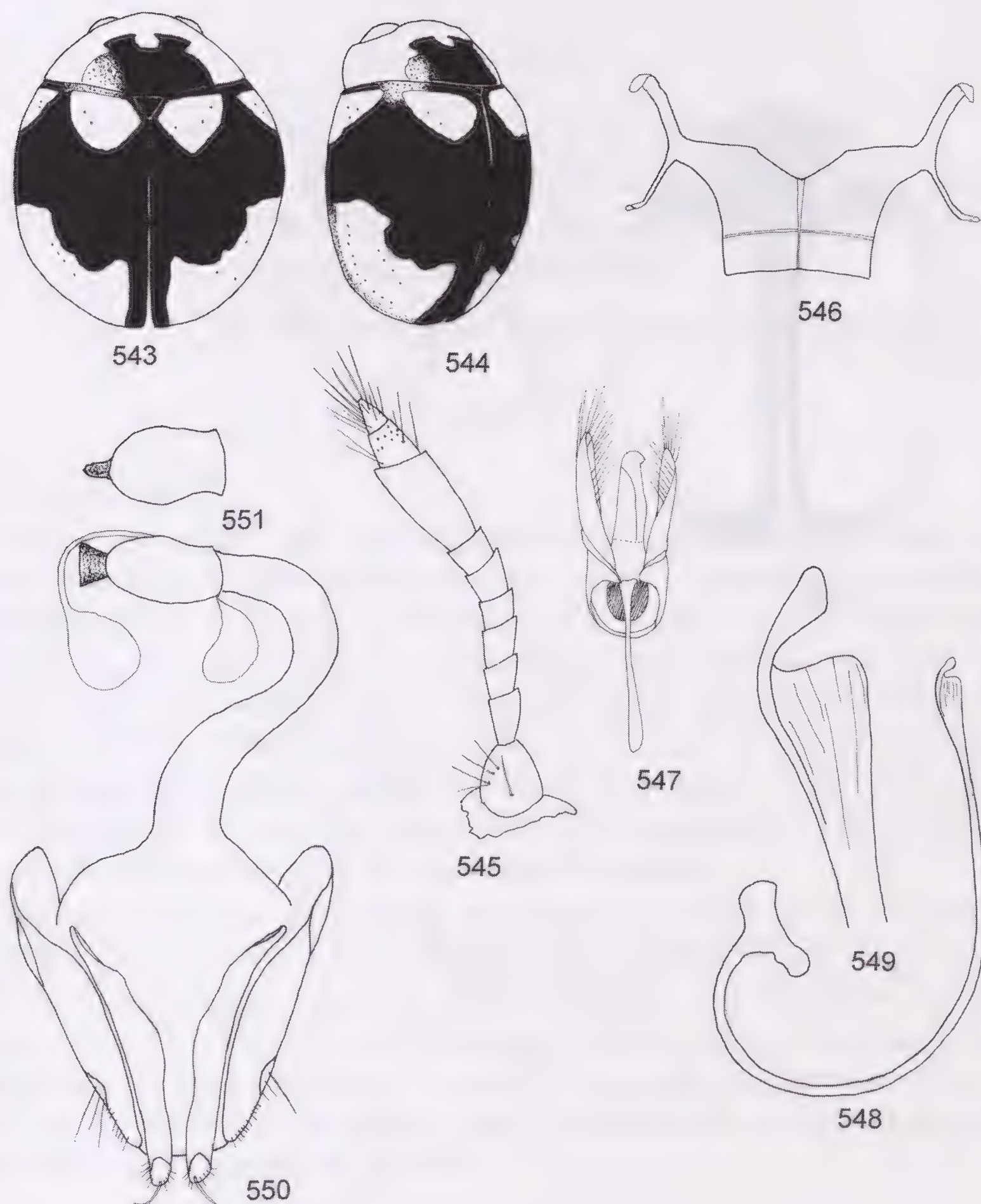
Figs. 522-528 - *Temuisvalvae ecoffeti* structures. 522-523, habitus. 524, antenna. 525-527, male genitalia. 525, phallobase; 526, siphon; 527, enlarged siphonal apex. 528, female genitalia.



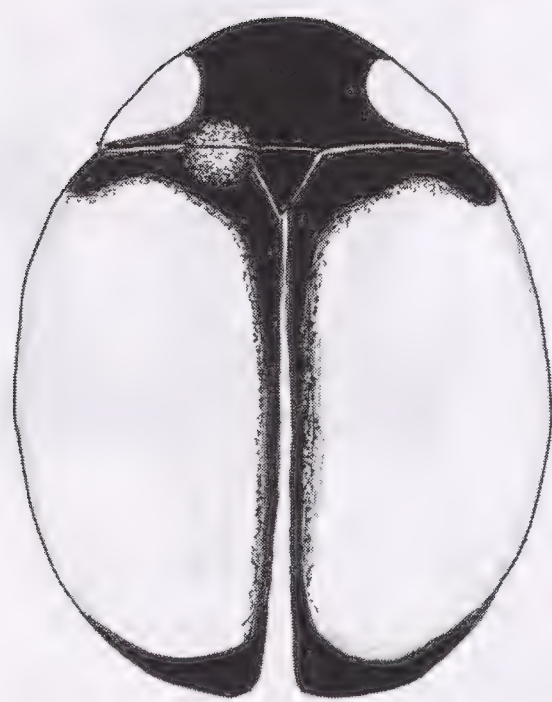
Figs. 529-535 - *Temuisvalvae parenthesis* structures. 529-530, habitus. 531, antenna. 532-534, male genitalia. 532, phallobase; 533, siphon; 534, enlarged siphonal apex. 535, female genitalia.



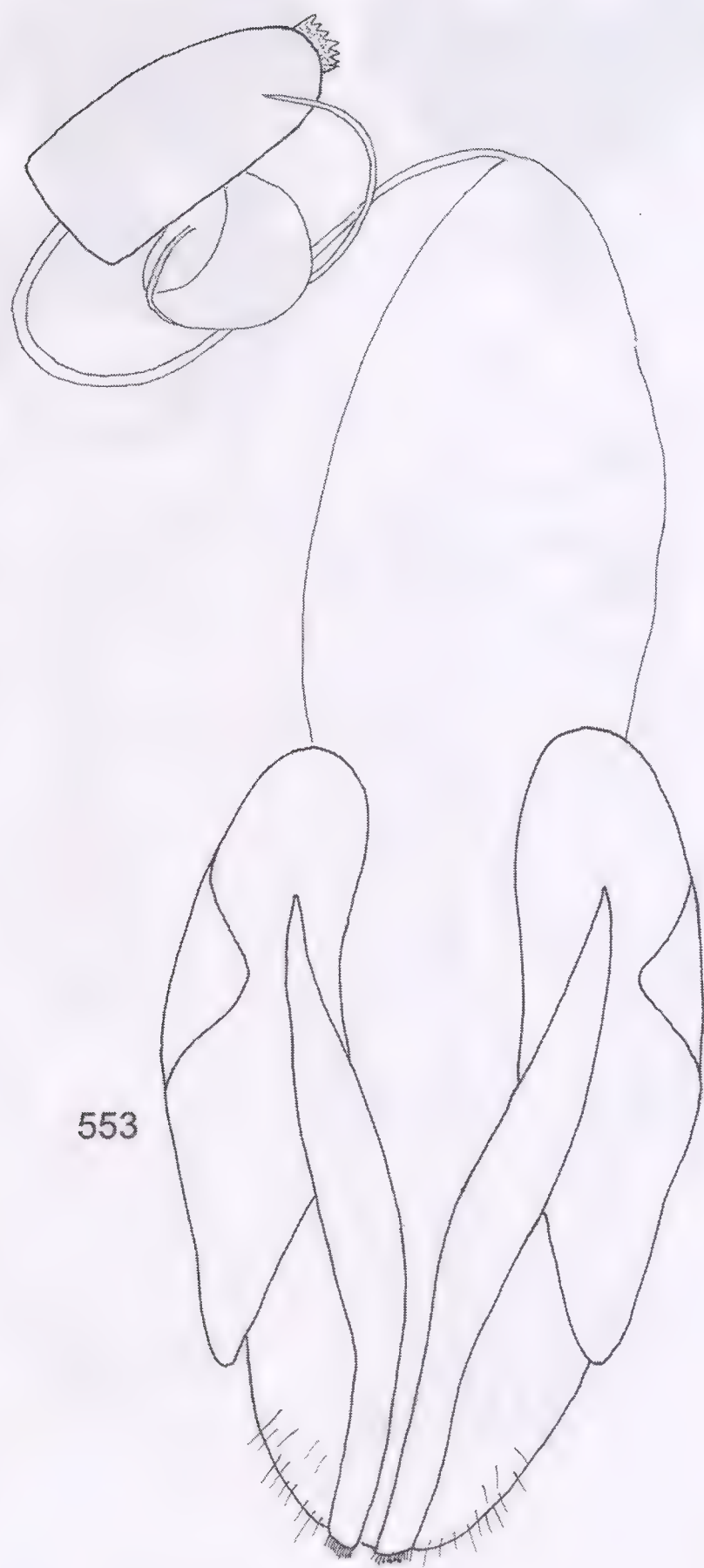
Figs. 536-542 - *Tenuisvalvae caucaensis* structures. 536-537, habitus. 538, antenna. 539-541, male genitalia. 539, phallobase; 540, siphon; 541, siphonal apex. 542, female genitalia.



Figs. 543-551 - *Temuisvalvae bromelicola* structures. 543-544, habitus. 545, antenna. 546, metendosternite. 547-549, male genitalia. 547, phallobase; 548, siphon; 549, enlarged siphonal apex. 550-551, female genitalia. 550, complete genitalia; 551, ventral view of basal unit.



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Figs. 552-553 - *Temisvalvae gnoma* habitus and female genitalia. 552, habitus. 553, female genitalia.